Falcon™ X3

with Windows CE

User's Manual

Datalogic Mobile S.r.l.
Via S. Vitalino 13
40012 - Lippo di Calderara di Reno
Bologna - Italy

Falcon X3 with Windows CE 6.0 - User's Manual

Software Version: 1.00

Ed.: 02/2011

©2010 - 2011 Datalogic Mobile S.r.l. - ALL RIGHTS RESERVED - Protected to the fullest extent under U.S. and international laws. • Copying, or altering of this document is prohibited without express written consent from Datalogic [name of the owner of the copyright].

Datalogic and the Datalogic logo are registered trademarks of Datalogic S.p.A. in many countries, including the U.S.A. and the E.U.
Falcon is a registered trademark of Datalogic Mobile Inc. in the U.S.A., Canada and the E.U.
The Falcon logo is a trademark of Datalogic Mobile Inc.
All other brand and product names mentioned herein are for identification purposes only and may be trademarks or registered trademarks of their respective owners.

CONTENTS

REFERENCES ..... **V**
Conventions v
Reference Documentation v
Services and Support v

GENERAL VIEW ..... **VI**

1 INTRODUCTION **1**
1.1 Falcon™ X3 Description 1
1.2 Models Description 3
1.3 Package Contents 4
1.4 Inserting a Micro SD Card 5
1.4.1 Removing the Micro SD Card 6
1.5 Accessories 7

2 BATTERIES AND MAINTENANCE **8**
2.1 Charging the Battery Pack 8
2.2 Replacing the Battery Pack 10
2.3 Cleaning the Mobile Computer 13

3 CONNECTIONS **14**
3.1 USB Connection 14
3.2 Connection to USB peripherals 16
3.3 RS232 Connection 18
3.4 WLAN Connection 19
3.5 WPAN Connection 21
3.6 Wireless and Radio Frequencies Warnings 22

4 USE AND FUNCTIONING **24**
4.1 Startup 24
4.1.1 Using the Stylus 25
4.1.2 Touch Gestures 26
4.2 Windows CE Touch Screen Calibration 27
4.3 Data Capture 28
4.3.1 Laser Data Capture 29
4.3.2 Imager Data Capture 30
4.4 Description of the Keys 32
4.4.1 Alphanumeric Keyboard 32
4.4.2 Numeric Keyboard 34
4.4.3 Resetting the Falcon X3 36
4.5 Status Indicators 38
4.5.1 LED Status 38
4.5.2 Taskbar 39
4.6 Data Capture Configuration 40
4.6.1 Configuration Control Panels 40
4.7 Control Panel 45
4.7.1 Buttons 46

4.7.2 Wireless Communications 47
4.7.3 Stylus Calibration 48
4.7.4 Volume Settings 50
4.8 Windows Connections 52
4.8.1 Windows Mobile® Device Center 52
4.8.2 Bluetooth® Manager Device Setup 54
4.9 Datalogic Firmware Utility 60
4.9.1 Retrieving a Firmware Image Update 60
4.9.2 Installing DFU on the Host PC 61
4.9.3 Updating the Firmware 62
4.9.4 Restoring the Firmware 63
4.10 Datalogic Configuration Utility 65

5 TECHNICAL FEATURES 66
5.1 Technical Data 66
5.2 Reading Diagrams 70

6 TEST CODES 73

SAFETY REGULATIONS 77
General Safety Rules 77
Power Supply 77
Laser Safety 78
LED Class 84
Radio Compliance 84
FCC Compliance 86
RF Exposure Information (SAR) 87
Industry Canada Compliance 88
SAR Compliance 89
Patents 89
WEEE Compliance 90

GLOSSARY 92

INDEX 96

REFERENCES

CONVENTIONS

This manual uses the following conventions:

“User” refers to anyone using a Falcon X3 mobile computer.
“Mobile computer” and "Falcon X3" refer to the Falcon X3 mobile computer.
“You” refers to the System Administrator or Technical Support person using this manual to install, configure, operate, maintain or troubleshoot an Falcon X3 mobile computer.
“Single Dock” refers to the Falcon X3 Single Slot Dock.

REFERENCE DOCUMENTATION

For further information regarding Falcon X3 refer to the SDK Help on-Line.

SERVICES AND SUPPORT

Datalogic provides several services as well as technical support through its website.
Log on to **www.mobile.datalogic.com** and click on the links indicated for further information including:

- **PRODUCTS**

  Search through the links to arrive at your product page where you can download specific **Manuals** and **Software & Utilities**

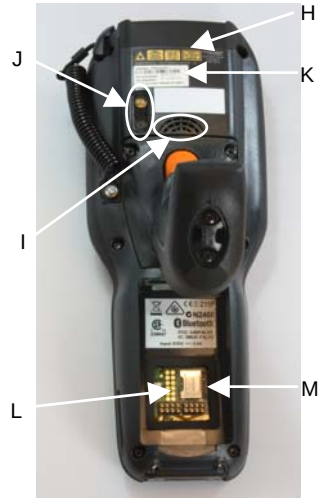
- **SERVICES & SUPPORT**

  - **Datalogic Services** Warranty Extensions and Maintenance Agreements
  - **Authorised Repair Centres**

- **CONTACT US**

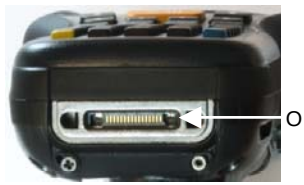
  E-mail form and listing of Datalogic Subsidiaries

GENERAL VIEW



A) Color Display*
B) ON/OFF Power Key
C) LEDs
D) Microphone
E) Front Scan Key
F) Keyboard
G) Stylus
H) Laser Safety Label
I) Loudspeaker
J) Color Camera and Flash
K) Product Label
L) Reset Key (under battery)
M) Micro-SD Card Slot (under battery)

*Remove protective film cover before use



N) Data Capture/Laser Output Window *
O) Handylink™ Connector (host/slave)

*Remove protective film cover before use

1 INTRODUCTION

1.1 FALCON™ X3 DESCRIPTION

The new Datalogic Falcon X3 mobile computer delivers the ultimate in ruggedness, ergonomics, computing and data capture technologies. Falcon X3 options provide a tailored solution for demanding environments needing real time transaction visibility. The Falcon X3 delivers rugged construction, laser and image data capture, along with real time communications in a product that is effortless to develop for, deploy and manage.

Enterprises rely on accurate inventories to both plan and manage activities. Three data capture options optimize the Falcon X3 to the application. A laser scanner tackles high volume environments where speed is essential to receiving and shipping operations. The imager captures linear, stacked and 2D codes to reduce failed reads due to damaged and poor quality barcodes. An optional camera takes pictures for the documentation of damaged or returned goods. Datalogic's patented Green Spot good read feedback reduces errors in both noisy and quiet environments. For applications like cross docking where bar codes can be close at hand or far away, an auto ranging laser offers an aggressive scanning solution.

The parallel computer architecture of the Falcon X3 melds the strengths of an XScale™ PXA310 microprocessor with a Cortex-M3 coprocessor. This combination gears the device for real time information management. Memory of 256 MB RAM / 256 MB Flash accommodates multiple simultaneous applications, for managing large databases or enabling off-line autonomy of thick applications. A Micro SD Card Slot provides a simple way for users to increase memory storage capacity as needed. The Falcon X3 tailors itself to the information technology practices of the enterprise through either the Microsoft Windows CE 6.0 or Microsoft Windows Mobile 6.5 operating system.

As information is collected the Falcon X3 turns to the task of communication via a Summit IEEE 802.11 a/b/g radio. Complimented by a CCX v4 certification from Cisco, the Falcon X3 provides infrastructure compatibility focused on enterprise requirements for encrypted communication and seamless roaming. Voice applications leverage the internet protocol connection for hands-free voice picking and push to talk communications. Bluetooth® Wireless Technology connects headsets, printers and other peripherals eliminating cumbersome wires. An extensive accessory offering accommodates existing installation needs for USB, RS232, modem or Ethernet communications.

The Falcon X3 comes in two form factors to tackle the differing scanning intensities found in an enterprise. A pistol grip version with numeric keypad tackles the high volume scan and quantity entry found at the receiving dock. While a hand held with alpha numeric keypad better suits the lighter pick and pack duty of preparing goods for shipment. The Falcon's low weight balances a large 3.5" display with a full size keyboard and a single piece 5000 mAh battery into both of these packages.

The Falcon X3 must do more than function for a full shift, it must survive daily abuse and trauma. The new Falcon X3 survives drops from 6 feet (1.8 meter) to concrete. Coupled with an IP64 sealing against water and dust allows the Falcon X3 to literally take an industrial pounding. Plastic key caps with metal snap dome actuation withstand not only the abusive environment but the heavy use found in third party logistics centers, literally millions of cycles per year.

Falcon delivers Datalogic's trademark ergonomics in a contoured package. An arched pistol grip handle and ergonomic trigger make the rapid receiving of goods comfortable through out the day. Falcon X3 numeric and alphanumeric keyboards use a phone key layout placing numeric keys at the device top with navigation, scan and enter keys. This highly functional layout places high use keys at the user's finger tips. Maximized key sizes drive additional user efficiency with or with out gloves. A crystal clear QVGA display and back lit keyboard make the Falcon X3 readable in dark back corners or full sunlight.

The Falcon X3 leverages Datalogic's open source software development kit (SDK) for creating applications. The Datalogic™ SDK provides a set of libraries allowing easy application development using C++, .NET and Java programming languages. Both MCL Collection and Wavelink® Studio™ offer additional solutions to enable development. For terminal emulation environments available tools include the Wavelink Industrial Browser™, Wavelink Terminal Emulation, and Wavelink Speakeasy.

Wavelink Avalanche™ device management tools make the Falcon X3 an easy device to both deploy and maintain. Datalogic Desktop, Configuration and Firmware Utilities deliver unprecedented ability to customize and update device configuration to the use environment or process. For small or remote installations, Scan to Configure provides simple barcodes that anyone can use to configure the Falcon X3. Wavelink Remote Control allows an administrator to remotely diagnose and remedy both applications and device settings. For added security the Falcon X3 can be implemented with Wavelink CE Secure and Wavelink Certificate Manager.

1.2 MODELS DESCRIPTION

The Falcon X3™ is available in different models depending on the options it is equipped with. All options are listed below:

- communication: IEEE 802.11 a/b/g, Bluetooth
- capture: High performance Laser with Green Spot, 2D Imager with Green Spot, Auto Ranging Laser
- form factor: Hand held, Pistol Grip
- keyboard: Numeric, Alphanumeric

For further details about the Falcon X3™ models refer to the web site: http://www.mobile.datalogic.com.

For further information regarding Windows CE refer to the website: http://www.microsoft.com/windowsembedded/en-us/default.mspx.

The currently available models are:

- 945250004 FalconX3 00A0HP-3N0-CEU1
  Falcon, PistolGrip, PXA 310, 256MB/256MB, 802.11 a/b/g, Laser w GS, Numeric, CE 6.0

- 945250005 FalconX3 00A0HP-3F0-CEU1
  Falcon, PistolGrip, PXA 310, 256MB/256MB, 802.11 a/b/g, Laser w GS, Alpha-Numeric, CE 6.0

- 945250006 FalconX3 00A0XL-3F0-CEU1
  Falcon, PistolGrip, PXA 310, 256MB/256MB, 802.11 a/b/g, Autorange Laser, Alpha-Numeric, CE 6.0

- 945250007 FalconX3 00A0WI-3F0-CEU1
  Falcon, PistolGrip, PXA 310, 256MB/256MB, 802.11 a/b/g, 2D w GS, Alpha-Numeric, CE 6.0

- 945200000 FalconX3 00A0HP-2N0-CEU1
  Falcon, Handheld, PXA 310, 256MB/256MB, 802.11 a/b/g, Laser w GS, Numeric, CE 6.0

- 945200001 FalconX3 00A0HP-2F0-CEU1
  Falcon, Handheld, PXA 310, 256MB/256MB, 802.11 a/b/g, Laser w GS, Alpha Numeric, CE 6.0

- 945200001 FalconX3 00A0HP-2F0-CEU1
  Falcon, Handheld, PXA 310, 256MB/256MB, 802.11 a/b/g, Laser w GS, Alpha Numeric, CE 6.0

1.3 PACKAGE CONTENTS

The Falcon X3™ package contains:

- 1 Falcon X3™ mobile computer
- 1 CD-ROM Datalogic SDK containing:
  - Datalogic Applications (DCU, DFU, SDK)
  - User Manual
- 1 rechargeable battery pack
- 1 Windows CE End User License Agreement (depending on model)
- 1 Keypad overlay

Other packages will contain the accessories necessary for the Falcon X3™ connection to the host computer and to the network: the cradle, and /or one or more connection cables.

Remove all the components from their packaging; check their integrity and congruity with the packing documents.

CAUTION

Keep the original packaging for use when sending products to the technical assistance center. Damage caused by improper packaging is not covered under the warranty.

NOTE

Rechargeable battery packs are not initially charged. Therefore the initial operation to perform is to charge them. See paragraph 2.1.

1.4 INSERTING A MICRO SD CARD

Falcon X3 provides the possibility to add a Micro SD memory storage card. To access the Micro SD card slot and insert the card, proceed as follows:

1. Turn off the Falcon X3.

2. Press the latch release and lift the battery from the enclosure, as indicated in the figure below:

3. Open the Micro SD card slot by pulling up the locking plate:

4. Insert the Micro SD card with the written part upward. Lock the card into place by pushing the cardholder down:

5. Replace battery

1.4.1 Removing the Micro SD Card

To remove the Micro SD card, follow the steps above to access the SD area, and remove it from its slot.

CAUTION

Follow proper ESD precautions to avoid damaging the SD. Proper ESD precautions include, but are not limited to, working on an ESD mat and ensuring that the operator is properly grounded.
Do not force the card. If you feel resistance, remove the card, check the orientation, and reinsert it.
Do not use the Micro SD card slot for any other accessories.

1.5 ACCESSORIES

- **Cradles**

94A151125	Dock, Single Slot, FalconX3
94A151131	Dock, Powered Mobile, FalconX3
94A151133	Dock, Ethernet 4 Slot, FalconX3
94A151135	Charger, 4 Slot Dock, FalconX3
94A151137	Charger, 4 Slot Battery, FalconX3

- **Batteries**

94ACC1386	Battery, High Capacity, FalconX3

- **Power Supply**

94ACC1381	Power Supply, Dock, PWR Plug 2.1mm
94ACC1385	Power Supply, Charger, MBC and Dock

- **Cables**

94A051970	Cable, USB Handylink, Client
94A051971	Cable, USB Handylink, Host
94A051972	Cable, RS232 Handylink, Client
94A051973	Cable, RS232 Handylink, Host
94A051975	Power Adapter, 12 to 24V PWR Plug 2.1mm
94A051976	Adapter, PWR Jack 2.1mm to Handylink

- **Various**

95ACC1056	Holster, FalconX3
94ACC1371	Module, Ethernet, Single Slot Dock
94ACC1372	Module, Modem, Single Slot Dock
94ACC1388	Softcase, FalconX3
94ACC1390	Handle Kit, Falcon X3
94ACC1391	Coverplate Kit, FalconX3
94ACC1392	Stylus, FalconX3 Pen with Tether (5pcs)

NOTE

Use only a Datalogic Mobile-approved power supply and cables. Use of an alternative power supply will invalidate any approval given to this device and may be dangerous.

2 BATTERIES AND MAINTENANCE

NOTE

Rechargeable backup batteries and battery packs are not initially charged. Therefore the initial operation to perform is to charge them. See below.

CAUTION

Annual replacement of rechargeable battery pack avoids possible risks or abnormalities and ensures maximum performance.

2.1 CHARGING THE BATTERY PACK

NOTE

The battery pack autonomy varies according to many factors, such as the frequency of barcode scanning, RF usage, battery life, storage, environmental conditions, etc.

The battery icon on the Taskbar indicates when the battery pack is low.

It is possible to recharge the battery pack by using a Single Cradle or the Falcon X3™ Multi Battery Charger.

Moreover recharging is possible by USB Direct connection with the host computer, but with longer charging times and only if the mobile computer is off.

During the charging process the LED positioned at the left side of the display is constant red. Once the charging process has been completed this LED is constant green (see par. 4.5).

If the battery pack is removed from the mobile computer, it can be recharged by inserting it into the rear slot of a Single Cradle or the Falcon X3™ Multi Battery Charger.

CAUTION

Do not use the Falcon X3™ until batteries are charged for minimum 4 hours.

CAUTION

Risk of explosion if battery is replaced by an incorrective type. Dispose of used batteries according to the instructions.

CAUTION

Il y a risque d'explosion si la batterie est remplacée par une batterie de type incorrect.
Mettre au rebut les batteris usagées conformément aux instructions.

NOTE

Even if the storage temperature range is wider, In order to achieve the longest battery life, store the terminal and the spare batteries between 20 to 30 ºC (68 to 86 ºF).

The Batteries must be charged at a temperature ranging from 0° to +40 °C (+32° to +104 °F).

For the GSM models the maximum recommended temperature is + 35° C. At higher values the charging may slow down.

NOTE

The battery level may not be displayed correctly for some minutes after the disconnection if the Falcon X3™ is disconnected from power supply before the charging cycle is completed.

NOTE

The Falcon X3™ could get warm during charging, this is normal and does not mean a malfunction.

NOTE

Use only a USB-IF compliant USB port as a charging source.

2.2 REPLACING THE BATTERY PACK

To correctly replace the battery pack, proceed as follows.

1. Turn off the Falcon X3™.
2. Press the latch release and lift battery from the enclosure as indicated in the figure below:

3. Install the new battery pack, first insert the top end, then the latch bottom as indicated in the following figure.

WARNING

Installing, charging and/or any other action should be done by authorized personnel and following this manual.

The battery pack may get hot, explode, ignite, and/or cause serious injury if exposed to abusive conditions.

If the battery pack is replaced with an improper type, there is risk of explosion.

Do not place the battery pack in or near a fire or heat; do not place the battery pack in direct sunlight, or use or store the battery pack inside unventilated areas in hot weather; do not place the battery pack in microwave ovens, dryer, high pressure containers, on induction cookware or similar device. Doing so may cause the battery pack to generate heat, explode or ignite. Using the battery pack in this manner may also result in a loss of performance and a shortened life expectancy.

Use only a Datalogic Mobile approved power supply. The use of an alternative power supply will void the product warranty, may cause product damage and may cause heat, explode or ignite.

The area in which the units are charged should be clear of debris and combustible materials or chemicals.

Do not use the battery pack of this terminal for power devices different from this mobile computer.

Immediately discontinue use of the battery pack if, while using, charging or storing the battery pack, the battery pack emits an unusual smell, feels hot, changes colour or shape, or appears abnormal in any other way.

Do not short-circuit the battery pack contacts connecting the positive terminal and negative terminal. This might happen, for example, when you carry a spare battery pack in your pocket or purse; accidental short–circuiting can occur when a metallic object such as a coin, clip, or pen causes direct connection of the contacts of the battery pack (these look like metal strips on the battery pack). Short–circuiting the terminals may damage the battery pack or the connecting object

Do not apply voltages to the battery pack contacts.

Do not pierce the battery pack with nails, strike it with a hammer, step on it or otherwise subject it to strong impacts or shocks.

Do not disassemble or modify (i.e. bend, crush or deform) the battery pack. The battery pack contains safety and protection devices, which, if damaged, may cause the battery pack to generate heat, explode or ignite.

WARNING

In case of leakage of liquid from the battery, avoid contact with liquid the skin or eyes. If the contact occurs, immediately wash the affected area with water and consult a doctor.

Do not solder directly onto the battery pack.

Do not expose the battery pack to liquids.

Avoid any knocks or excessive vibrations. If the device or the battery is dropped, especially on a hard surface, you should take it to the nearest Authorised Repair Centre for inspection before continuing to use it.

Do not replace the battery pack when the device is turned on.

Do not remove or damage the battery pack's label.

Do not use the battery pack if it is damaged in any part.

Battery pack usage by children should be supervised.

Collect and recycle waste batteries separately from the device in comply with European Directive 2006/66/EC, 2002/95/EC, 2002/96/EC and subsequent modifications, US and China regulatory and others laws and regulations about environment.

NOTE

In order to guarantee an adequate operating autonomy, when replacing the battery pack the mobile computer checks the battery energy level. If the battery is not sufficiently charged, Falcon X3™ does not turn on (when pressing the ON/OFF key).
In this case, either substitute the battery pack with a charged one (sufficiently charged) or insert Falcon X3 into a powered cradle or plug it into the direct power supply.

NOTE

To achieve the best battery life, turn off the radios not in use.

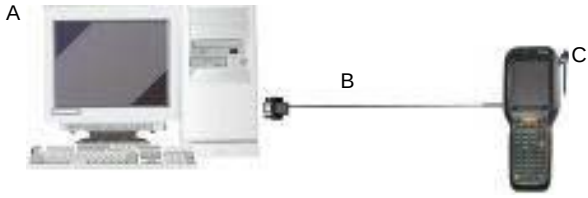
2.3 CLEANING THE MOBILE COMPUTER

Periodically clean the Falcon X3 with a slightly dampened cloth.

3 CONNECTIONS

3.1 USB CONNECTION

You can use a Datalogic Handylink cable 94A051970 to directly connect the Falcon X3 to a host computer to transfer data through the USB interface.



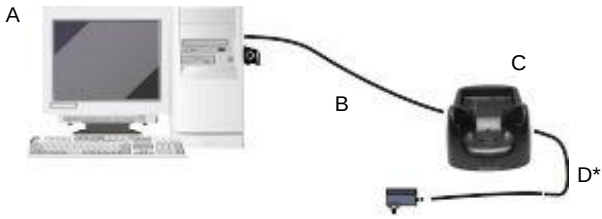
Key:

A) Host Computer
B) 94A051970 Handylink USB Client Cable
C) Falcon X3

NOTE *Connection through the cable is compliant to 2.0 USB standard.*

The Single Dock can be connected to the Host by means of a Micro-B USB cord, such as Datalogic 94A051968 cable.

Once the host has been turned on, insert the Falcon X3 mobile computer into the cradle.



Key:

A) Host Computer
B) 94A051968 Micro USB Client Cable
C) Falcon X3 Single Slot Dock
D) 94ACC1381 Power Adapter

NOTE

Connection through the cradle is compliant to 2.0 USB standard.

NOTE

The actual data transfer speed can be appreciably lower than the maximum theoretical speed.

3.2 CONNECTION TO USB PERIPHERALS

To connect the Falcon X3 to a keyboard or a memory, connect the terminal to the Datalogic 94A051969 cable or to the Datalogic 94A051971 cable (together with a standard A to micro A USB cable).
For all these devices maximum current withdrawal must be below 100mA.

Key:

A) Keyboard with USB interface

B) Falcon X3

C) 94A051969 Micro USB Host Cable/ 94A051971 Handylink Micro USB Host Cable

D) Standard A to Micro A USB Cable

Key:

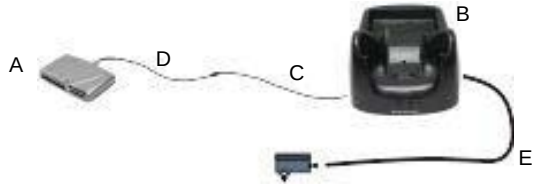
A) USB hard drive/ external memory source

B) Falcon X3

C) 94A051971 Handylink Micro USB Host Cable

D) Standard A to Micro A USB Cable

Connect the Single Slot Dock to the peripheral by means of a Micro-A USB cord, or use a Micro-A to Std-A receptacle USB adapter such as Datalogic 94A051969 (together with a standard USB cable if needed).



A) USB Peripheral (memory)

B) Falcon X3 Single Slot Dock

C) 94A051969 Micro USB Host Cable

D) Standard A to Micro A USB Cable

E) 94ACC1381 Power Adapter

NOTE

Falcon X3 works with most of mentioned USB peripherals. In any case, we can't guarantee good operations with all devices available on market place.

NOTE

Connection is compliant to 1.1 USB standard.

NOTE

The actual data transfer speed can be appreciably lower than the maximum theoretical speed.

3.3 RS232 CONNECTION

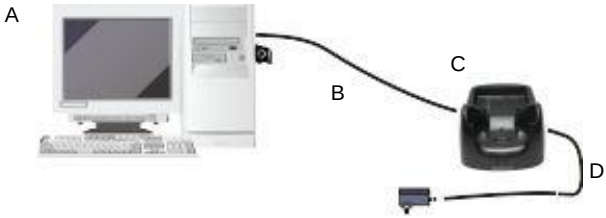
You can use the Datalogic 94A051972 cable to directly connect the Falcon X3 to a host computer to transfer data through the RS232 interface.

Key:

A) Host Computer
B) 94A051972 Handylink Micro RS232 Client Cable
C) Falcon X3

The Single Slot Dock can be connected to the Host by means of a standard null modem cable such as Datalogic 94A051020 CAB-427 for 9-pin connections.

Once the Host has been turned on, insert the Falcon X3 mobile computer into the cradle.



Key:

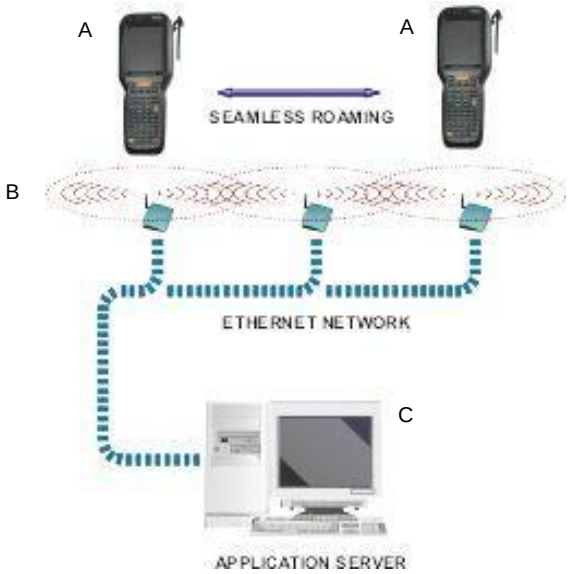
A) Host Computer
B) 94A054000 9-pin serial cable
C) Falcon X3 Single Slot Dock
D) 94ACC1385 Power Adapter

3.4 WLAN CONNECTION

Falcon X3 802.11 a/b/g radio models can communicate with the host using the on-board radio frequency component and an Access Point connected to the host computer.

For models using the 802.11 a/b/g radio, you can find information about the applet for radio configuration: http://www.summitdatacom.com/SCU.htm.
To launch this utility you can tap the specific icon if it's visible on the taskbar or:

1. On Windows CE devices, you can open Connections folder or Control Panel from desktop and select the 'Summit Client Utility' icon.
2. On Windows Mobile devices, you can select the menu item: Start->Programs->Summit and tap the 'Summit Client Utility' icon.



Key:

A) Falcon X3
B) Access Point
C) Host – Application Server

NOTE

802.11 a/b/g radio module is on by default, in order to avoid wasting energy, you can switch it off using the Wireless Communications applet.

NOTE

Suspending the terminal powers off the 802.11a/b/g radio and drops the radio connection. When the terminal resumes, depending on the radio power mode and security protocol selected, it may take up to 30 seconds for the 802.11b/g radio driver to re-associate the radio to the network.

NOTE

Area coverage and radio performance may vary, due to environmental conditions, access points types or interference caused by other devices (microwave ovens, radio transmitters, etc.)

NOTE

In case of heavy usage the Falcon X3 could get warm, this is normal and does not mean a malfunction.

3.5 WPAN CONNECTION

Falcon X3 mobile computer models with Bluetooth® can communicate with other Bluetooth® enabled devices, such as a printer, within a range of 10 m, using the onboard Bluetooth® module.

Key:

A) Falcon X3

B) Bluetooth® printer

NOTE

In order to avoid wasting energy, the Bluetooth® module is off by default. If you need to have Bluetooth® working, the module must be powered on using the Wireless Communications applet (see par. 4.7.2), and perform the Discovery procedure (see par. 4.8.2).

NOTE

Suspending the terminal powers off the Bluetooth® radio and drops the piconet (Bluetooth® connection). When the terminal resumes, it takes approximately 10 seconds for the Bluetooth® radio driver to re-initialize the radio.

NOTE

Area coverage and Bluetooth® radio performance may vary, due to environmental conditions or interference caused by other devices (microwave ovens, radio transmitters, etc.), etc.

3.6 WIRELESS AND RADIO FREQUENCIES WARNINGS

WARNING

Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications or attachments could damage the product and may violate laws and regulations.

WARNING

Most modern electronic equipment is shielded from RF signals. However, certain electronic equipment may not be shielded against the RF signals generated by Falcon X3.

WARNING

Datalogic recommends persons with pacemakers or other medical devices to follow the same recommendations provided by Health Industry Manufacturers Associations for mobile phones.
Persons with pacemakers:

- *Should ALWAYS keep this device more than twenty five (25) cm from their pacemaker and/or any other medical device;*
- *Should not carry this device in a breast pocket;*
- *Should keep the device at the opposite side of the pacemaker and/or any other medical device;*
- *Should turn this device OFF or move it immediately AWAY if there is any reason to suspect that interference is taking place.*
- *Should ALWAYS read pacemaker or any other medical device guides or should consult the manufacturer of the medical device to determine if it is adequately shielded from external RF energy.*

In case of doubt concerning the use of wireless devices with an implanted medical device, contact your doctor.

WARNING

Turn this device OFF in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may use equipment that could be sensitive to external RF energy.

WARNING

RF signals may affect improperly installed or inadequately shielded electronic systems in motor vehicles. Check with the manufacturer or its representative regarding your vehicle. You should also consult the manufacturer of any equipment that has been added to your vehicle.

WARNING

An air bag inflates with great force. DO NOT place objects, including either installed or portable wireless equipment, in the area over the air bag or in the air bag deployment area. If vehicle's wireless equipment is improperly installed and the air bag inflates, serious injury could result.

WARNING

Turn off the device when in any area with a potentially explosive atmosphere. Observe restrictions and follow closely any laws, regulations, warnings and best practices on the use of radio equipment near fuel storage areas or distribution fuel areas, chemical plants or where some operation involves use of explosive materials.

Do not store or carry flammable liquids, explosive gases or materials with the device or its parts or accessories.

Areas with a potentially explosive atmosphere are often, but not always, clearly marked or showed.

Sparks in such areas could cause an explosion or fire, resulting in injury or even death.

4 USE AND FUNCTIONING

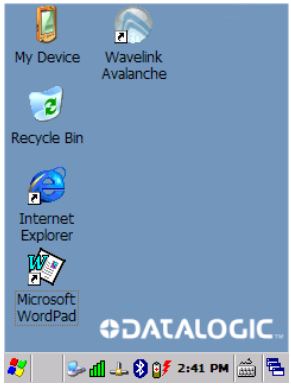
The use of the Falcon X3 depends on the application software loaded. However there are several parameters that can be set and utilities that can be used to perform some basic functions such as data capture, communications, file management, etc.

4.1 STARTUP

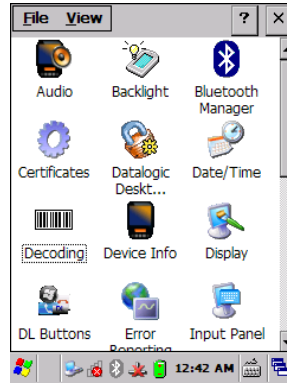
The Falcon X3 turns on when the battery pack or the external supply is inserted.

After the battery pack is installed, use the [ON/OFF] key to turn the mobile computer on and off.

As soon as the mobile computer is on, the Windows CE 6.0 desktop configuration will appear on the screen. Wait a few seconds before starting any activity so that the mobile computer completes its startup procedure.



Desktop



Control Panel

Use the stylus (par. 4.1.1) as suggested to select icons and options.

The mobile computer goes into power-off (low power with display and keyboard backlight off), when it is no longer used for more than a programmable timeout, which is defined in the POWER applet of the Control Panel. In this mode it can be awakened (resuming operation) by the [ON/OFF] key.

NOTE

The mobile computer can also be awakened or turned off by the application program.

4.1.1 Using the Stylus

The stylus selects items and enters information. The stylus functions like a mouse.

Double Tap:	Double tap the screen with the stylus to open items and select options.
Drag:	Hold the stylus on the screen and drag across the screen to select text and images. Drag in a list to select multiple items.
Tap-and-hold:	Tap and hold the stylus on an item to see a list of actions available for that item. On the pop-up menu that appears, tap the action you want to perform.

To recalibrate the touch screen use the Stylus Applet (see par. 4.7.3).

CAUTION

Use only original Datalogic styluses supplied with the product itself.

In harsh applications, use of screen protectors should be taken into consideration, in order to extend the touch screen operating life.

To prevent damage to the screen, do not use sharp devices or any device other than the Datalogic Mobile-provided stylus.

Do not apply unnecessary high pressures on the screen.

For applications where an intensive use of the touch screen is foreseen, please consider that touch screen components are subject to progressive wear.

4.1.2 Touch Gestures

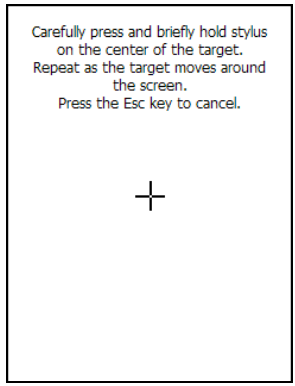
Touch gestures describe gestures in which you use a finger or stylus to make a short, directional movement over a control or object on the screen. Most gestures are a single stroke. Windows CE supports five kinds of gestures.

Tap:	A tap represents the left click of a mouse.
Double Tap:	A double tap represents the left double click of a mouse.
Hold:	The user can press and hold on the screen to represent the right click of a mouse.
Flick:	The user can move a finger across the screen to initiate per-pixel scrolling, and if this movement is fast enough, scrolling will continue after the finger is lifted.
Pan:	The user can press and hold on the screen and then drag the finger in any direction to represent a mouse move event.

4.2 WINDOWS CE TOUCH SCREEN CALIBRATION

In Windows CE, at the very first Falcon X3 startup, following a clean boot to restore the registry to default values, the mobile computer startup (see par. 4.1) is preceded by the touch screen calibration screen. The touch screen calibration will also appear when the mobile computer is hard reset (cold boot), but the user may press Esc to exit from the calibration.

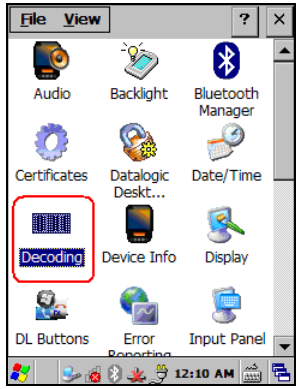
The user must calibrate the touch screen (see par. 4.7.3):


Carefully press and briefly hold stylus
on the center of the target.
Repeat as the target moves around
the screen.
Press the Esc key to cancel.

Touch Screen Calibration Screen

4.3 DATA CAPTURE

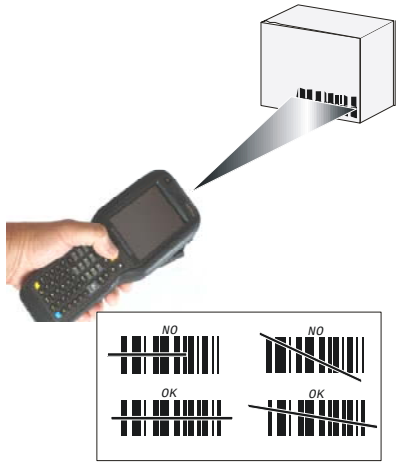
To capture data first of all tap Start > Settings > System > Decoding:



To configure and enable data capture parameters refer to par. 4.6.

4.3.1 Laser Data Capture

To scan barcodes, point the Falcon X3 laser model onto the code from a distance within the reading range while pressing the SCAN key.
The lighted band emitted by the laser must completely intercept the barcode as shown in the figure below.



The XLR engine includes a pointer mode that projects a highly visible scan line at longer ranges to make it easier to accurately target bar codes. The user simply holds the trigger down until the aimer is on the appropriate code. Releasing the trigger then initiates the bar code scan.

If the scan has taken place correctly:

- the Good Read LED turns green until the user releases the trigger or scan button;
- if enabled, the Good Read beep is sounded;
- if enabled, the Green Spot is projected on the bar code.

NOTE

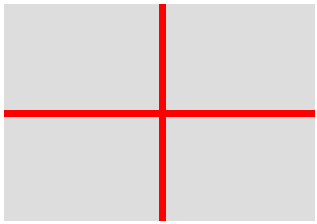
Remove the protective film cover over the Laser Output Window before use.

4.3.2 Imager Data Capture

The Falcon X3 Imager captures a picture of the entire bar code. The omni-directional scanning does not require that the operator orient the bar code to align with the scan pattern.

To read a 1D or 2D code, simply point the Falcon X3 Imager model onto the code and press the SCAN Key.

The Falcon X3 Imager uses an intelligent aiming system pattern, similar to those on cameras, indicating the field of view, which should be positioned over the code:



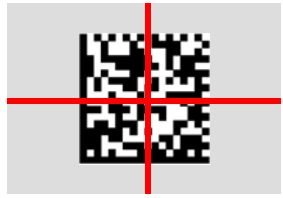
Aiming System

If the aiming system pattern is centered over the entire symbology as shown in the following figure, either wait for the timeout or release the Scan key to capture the image.

A red beam illuminates the code, which is captured and decoded. You will get a good read

Linear barcode

2D Matrix symbol



Relative Size and Location of Aiming System Pattern

The field of view changes its size as you move the reader closer or farther away from the code. The field of view indicated by the aiming system pattern will be smaller when the Falcon X3 Imager is closer to the code and larger when it is farther from the code.

Symbologies with smaller bars or elements (mil size) should be read closer to the unit. Symbologies with larger bars or elements (mil size) should be read farther from the unit.

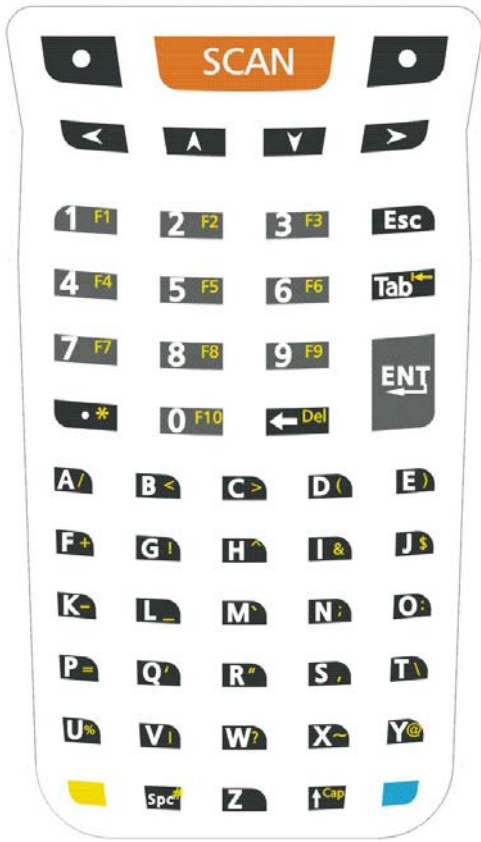
If the scan has taken place correctly:

- the Good Read LED turns green until the user releases the trigger or scan button;
- if enabled, the Good Read beep is sounded;
- If enabled, the Green Spot is projected on the bar code.

4.4 DESCRIPTION OF THE KEYS

The Falcon X3 provides two different keyboards, an alphanumeric keyboard and a numeric keyboard, having a total of respectively 52 and 29 keys.

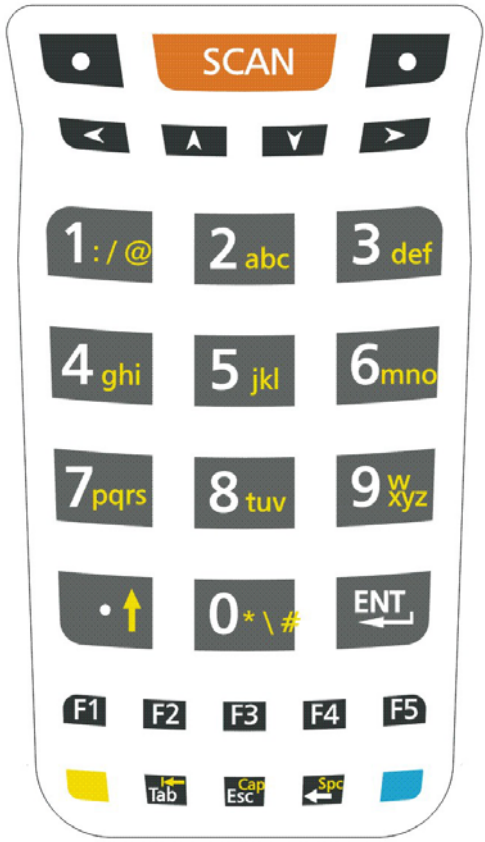
4.4.1 Alphanumeric Keyboard



Main Keys Function

KEY	FUNCTION
	It starts barcode data capture.
	They let you move forwards, backwards, upwards or downwards within text fields, scroll through a Menu list or browse among folder files.
	Yellow modifier (toggle key): when pressed before a standard key, it enables the character or function printed in yellow above the key.
	Blue modifier (one shot key): when pressed before a standard key, it enables the character or function printed in blue above the key.
	It powers the Falcon X3 on or off. it is placed on the upper left side of the terminal.

4.4.2 Numeric Keyboard



Main Keys Function

KEY	FUNCTION
	It starts barcode data capture.
	They let you move forwards, backwards, upwards or downwards within text fields, scroll through a Menu list or browse among folder files.
	Yellow modifier (toggle key): when pressed before a standard key, it enables the character or function printed in yellow above the key.
	Blue modifier (one shot key): when pressed before a standard key, it enables the character or function printed in blue above the key.
	It powers the Falcon X3 ON or OFF. It is placed on the upper left side of the terminal.

4.4.3 Resetting the Falcon X3

There are several reset methods for the Falcon X3.
A warm boot terminates an unresponsive application and clears the working RAM, but preserves the file system. Registry is restored from persistent memory if available or returned to factory default.
A cold boot forces all applications to close reinitializing completely the system. It clears the working RAM, but the file system is preserved. Registry is restored from persistent memory.
A clean boot restores the Falcon X3 to a clean configuration: both the registry and the file system returns to a clean status that conforms to factory default.

Warm Boot

To perform a warm boot, press and hold the following keys simultaneously:

Cold Boot

To perform a cold boot, do the following steps:

1. Turn off the Falcon X3 by pressing the on-off key.
2. Pull the battery latch down and remove the battery pack.
3. Press and hold the scan button and then press the reset button.
4. Insert the battery pack.
5. Turn on the Falcon X3 by pressing the on-off key.

Clean Boot

To perform a clean boot, do the following steps:

1. Perform a Cold Boot (see Cold Boot).
2. Press and hold down the 0 and Esc keys simultaneously and then press the on-off key:

A dialog box will appear asking for confirmation. Press the Enter Key.

	Warm Boot	Cold Boot	Clean Boot
Registry	Restored from flash	Preserved	Clean configuration (no user config)
File System	Restored from flash	Preserved	Clean Installation (no user files)

4.5 STATUS INDICATORS

4.5.1 LED Status

The Falcon X3 provides three different LEDs signaling the mobile computer status.

LED	STATUS	
Good Read (right side)	Red	Scanning LED is ON from the time the user hits the scan button (Trigger) until the bar code is decoded (laser models) Time-out (imager models)
	Green	Scanning LED is ON, showing a good decode.
Charging Status (left side)	Green	Constant once the charging process has been completed (full charge).
	Red	Constant while charging.
	Red blinking	Charge fault
Keyboard Status (center)	Off	Keyboard in primary
	Yellow solid	Yellow alternate key mode
	Blue solid	Blue alternate key mode
	Pink	CapsLock available for use by the application, cause and duration

4.5.2 Taskbar

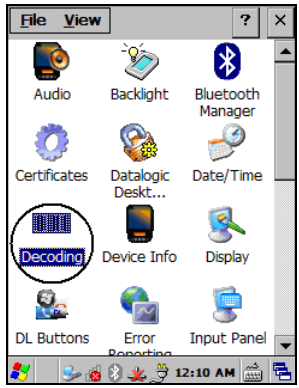
The Taskbar provides quick view and links to the Wi-Fi, Bluetooth, and Clock settings. It also makes available the keyboard SIP and window selection.

ICONS	DESCRIPTION
Time and Battery Icons	
	It displays the system battery status.
	It indicates that the battery is charging

Windows CE Taskbar

4.6 DATA CAPTURE CONFIGURATION

You can configure the Falcon X3's decoding options by tapping Start -> Settings -> System -> Decoding.



There are two sections in the Decoding control panel, each containing additional pages. There are six General Configuration pages and multiple Barcode symbology pages.

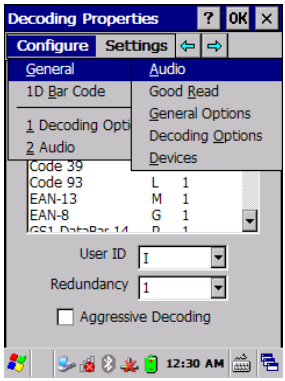
4.6.1 Configuration Control Panels

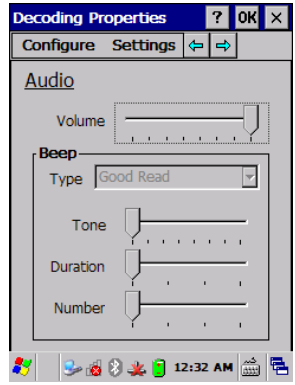
Select the desired configuration from the options shown in the figure below, and the other Decoding Properties figures on the following pages.

Select General or 1D Bar Code, then use the menu or tap the left and right arrow keys to navigate the different pages of the Decoding utility. The menu options will change to reflect the items most recently selected.

Audio

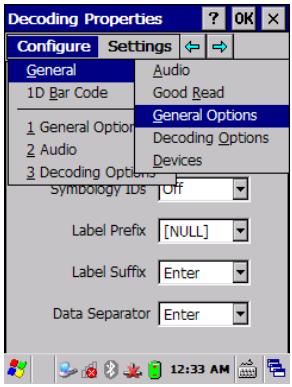
From the Decoding Properties page, tap Configure > General > Audio. Use to set volume, tone, duration, and number of various types of beeps.

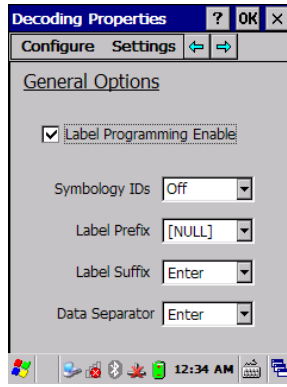




General Options

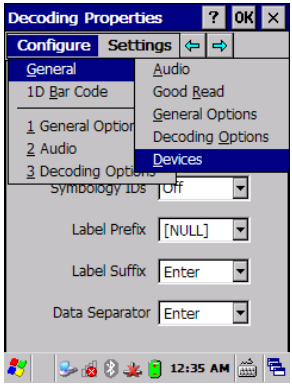
From the Decoding Properties page, tap Configure > General > General Options. Select from Label Programming Enable, Symbology IDs, Label Prefix, Label Suffix, and Data Separator.

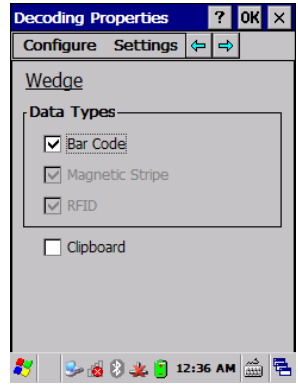




Devices

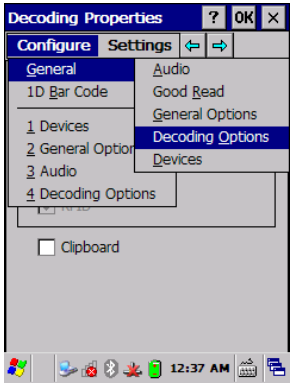
From the Decoding Properties page, tap Configure > General > Devices. Use to enable or disable the keyboard wedge for Barcode scanner.

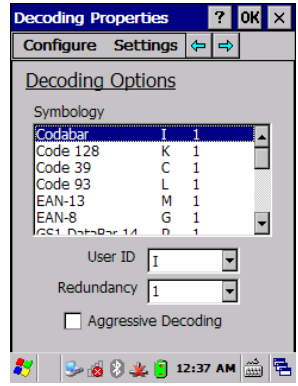




Decoding Options

From the Decoding Properties page, tap Configure > General > Decoding Options. Select a symbology to view or change the available properties settings.

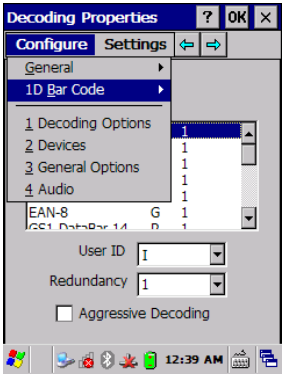


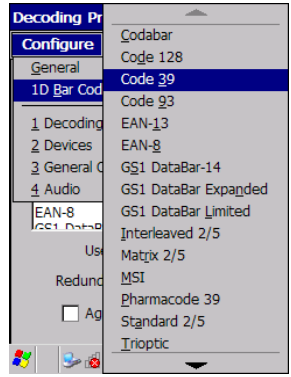


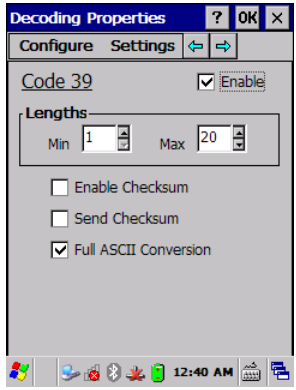
Select Configure > General from the menu to view other configuration options.

1D Barcode Symbology Pages

Use the drop-down menus from Configure > 1D Barcode, or tap the left and right arrow keys to navigate the different pages of the barcode symbology pages.







Select Configure > ID Bar Code from the menu to view other configuration options.

Each barcode symbology opens to its own page, as shown in the figure below. Refer to the sample symbology control panels for examples of the types of fields and options you can modify.

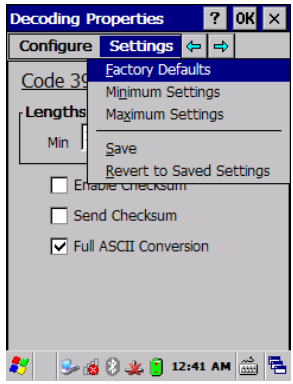
- Code 39: Select Enable Checksum, Send Checksum, Full ASCII Conversion.

Decoding Settings

Select from the Decoding Properties Settings menu to restore previous configurations and/or other available default settings. Choose from:

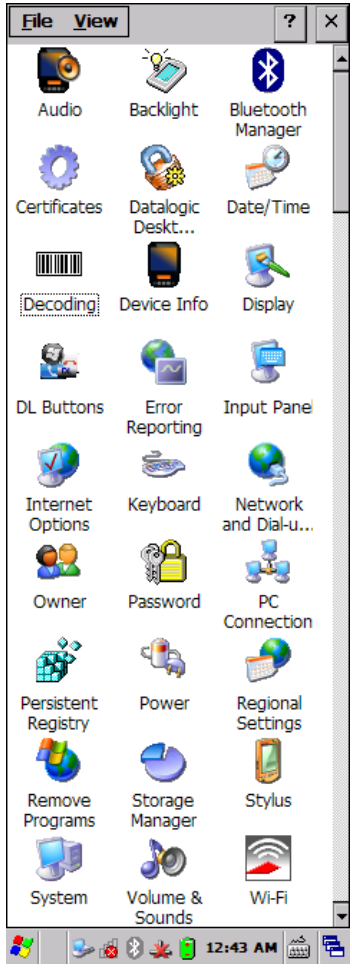
- Factory Defaults
- Minimum Settings
- Maximum Settings
- Save (New Settings)
- Revert to Saved Settings

The settings are saved when you tap OK. To permanently save these settings you need to save the registry using the Persistent Registry applet in the Control Panel.



4.7 CONTROL PANEL

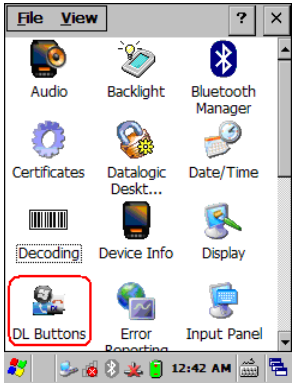
From the Start menu, tap Settings then Control Panel. Below is an expanded view of the Control Panel showing all of the applets.

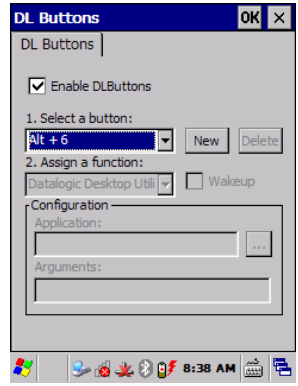


ì

4.7.1 Buttons

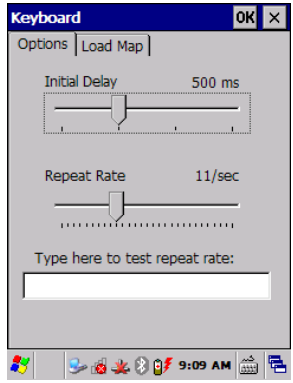
From the Start menu, tap Settings > Control Panel > DL Buttons.
On the Program Buttons tab, customize the program hardware buttons to launch your most used applications. Under Select a button, tap the button you want to assign a program to, and then select a program from Assign a program.





You can also select to wake up the terminal by the SCAN key.

To configure the way up/down and the rest of keys control repeats, use the Up/Down Control applet (Start > Settings > Personal > Buttons > Up/Down Control).



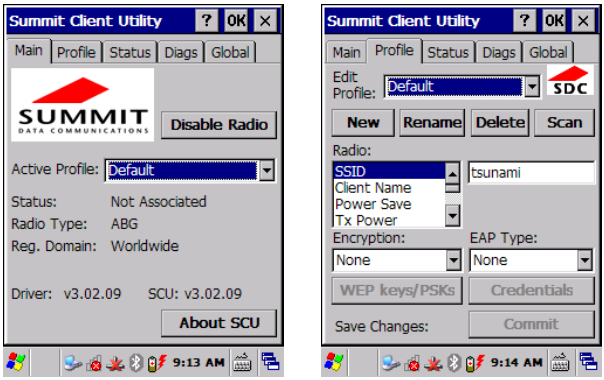
4.7.2 Wireless Communications

The WIRELESS COMMUNICATIONS applet provides management of the 802.11a/b/g radio.

Connected and Disconnected

Connectivity Icons

The Summit Client Utility manages access to wireless connections.
Select Start > Settings > Control Panel > Wi-Fi:



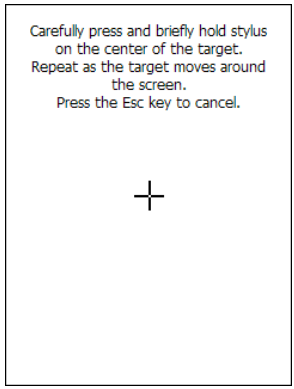
Summit Client Utility

4.7.3 Stylus Calibration

You might need to recalibrate the touch screen (i.e. when you attempt to select one item with the stylus, another item is erroneously selected).
To recalibrate the touch screen, complete the following steps:

1. Select **Start > Settings > Control Panel > Stylus** to open the **Stylus Settings** dialog as shown in the figure below:

2. Tap **Align Screen** to open the **Calibration** screen shown in the figure below.
3. Carefully press and briefly hold stylus on the center of the target. Repeat as the target moves around the screen.
4. By completing the calibration procedure you implicitly accept the new calibration settings.
5. New calibration settings are persistently saved in registry.


Carefully press and briefly hold stylus on the center of the target.
Repeat as the target moves around the screen.
Press the Esc key to cancel.

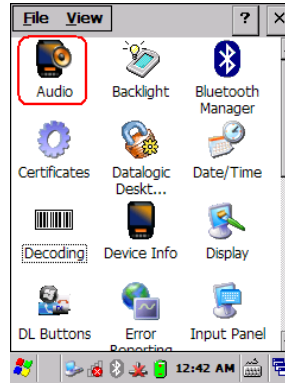
Startup stylus calibration

When starting the terminal, a Welcome Wizard (with Stylus Calibration) comes up if valid calibration settings are not available. This happens in the following circumstances:

1. At the first startup of the terminal.
2. After restoring registry default settings using the applet **Registry Admin** and performing a boot.
3. After a **Clean Boot**.

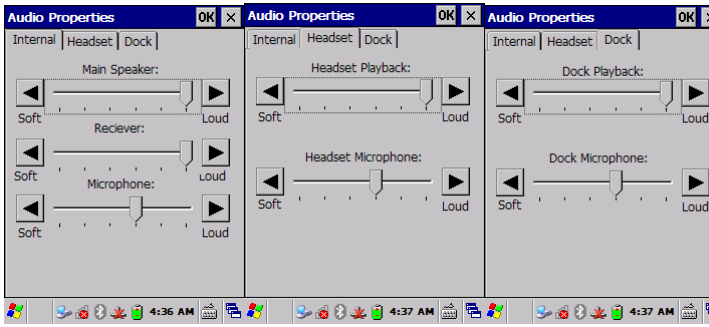
4.7.4 Volume Settings

From the Start Menu, select Settings > Sounds and Notifications:



Sounds and Notifications Window

The Audio applet allows to set the recording volumes of the main microphone and of the headset microphone. Also, it allows to set the headset volume when the user is listening to an audio file.



To set the speaker volume during a call, click the icon on the right top of the Windows Mobile Start Menu. To set the front speaker or the headset speaker volume, use the right bar or move the joystick up and down.
To set the rear speaker volume, use the left bar.

To set the Bluetooth® headset volume, tap:

Start > Settings > System > Bluetooth Manager > Connections and select the headset. The following window will appear:

4.8 WINDOWS CONNECTIONS

To connect the Falcon X3 to another device (i.e. Host PC) from Windows, several programs are available. These programs require specific electrical connections in order to function properly.

4.8.1 Windows Mobile® Device Center

Windows Mobile® Device Center gives you the possibility to connect your desktop computer to your Falcon X3 and synchronize the information on them. Synchronization compares the data on the Falcon X3 with that on the desktop computer and updates both computers with the most recent information.

With Windows Mobile® Device Center" it is possible to:

- Back up and restore Falcon X3 data.
- Copy files between Falcon X3 and desktop computer.
- Synchronize files by selecting a synchronization mode.

You can establish a connection to your Falcon X3 through the following electrical interfaces:

- **USB** either directly or through the Single Dock
- **Bluetooth®** (see par. 4.8.2)

Synchronizing lets you transfer e-mail, contacts, appointments, tasks, Web favorites, and media files from your computer to your device or from your device to your computer. You must accept an update to Windows Mobile Device Center (WMDC) on your computer before you can use WMDC to synchronize the Falcon X3 with a host PC or with a Microsoft Exchange Server.

To establish a connection between the Falcon X3 and a host PC, start Windows Mobile® Device Center, which is pre-installed on the mobile computer, and follow the steps below:

1. Connect the Falcon X3 to the host PC. Windows Mobile® Device Center configures itself and then opens.
2. On the licence agreement screen, click Accept.
3. On the Windows Mobile Device Center's Home screen, click Set up your device.
4. Select the information types that you want to synchronize, then click Next.
5. Enter a device name and click Set Up.

When you finish the setup wizard, Windows Mobile Device Center synchronizes the mobile computer automatically. Microsoft® Office Outlook® emails and other information will appear on your device after synchronisation.

NOTE

Visit the following Microsoft Web site for the latest in updates and technical information:
http://www.microsoft.com/windowsmobile/en-us/help/synchronize/device-synch.mspx

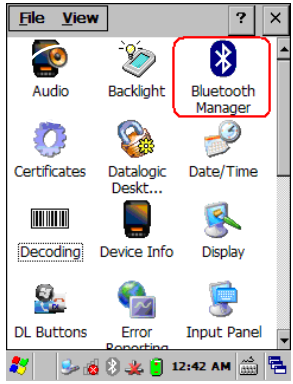
4.8.2 Bluetooth® Manager Device Setup

NOTE

The Bluetooth Device Properties icon will only be visible if Bluetooth® hardware has been installed on the unit.

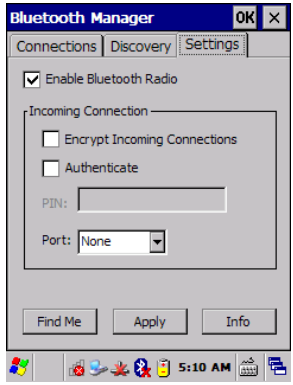
Before turning on Bluetooth®, ensure that the two devices are within close range and that both Bluetooth-enabled devices are discoverable.

1. Tap Start > Settings > System > Bluetooth Manager to open the Bluetooth® control panel.

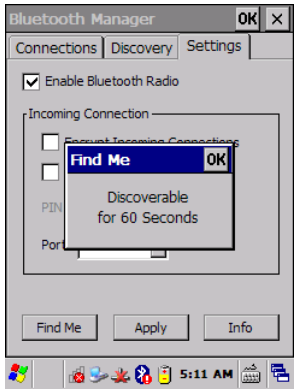


2. Tap Settings. The Settings tab allows you to enable or disable the Bluetooth® radio and specify settings for Incoming Connections.

3. Select or clear the “Enable Bluetooth Radio” check box:



4. Tap Find Me if you want to make the Falcon X3 visible to other Bluetoot® devices for 60 seconds, allowing them to set up a connection.



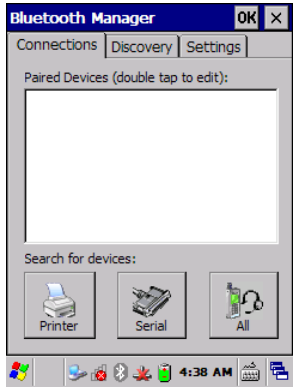
NOTE

By default, Bluetooth® is turned off. If you turn it on, and then turn off your device, Bluetooth® also turns off. When you turn on your device again, Bluetooth® turns on automatically.

To create a Bluetooth® partnership between your device and another device that has Bluetooth® capabilities, ensure that the two devices are turned on, discoverable, and within close range.

1. Open the Bluetooth® control panel by tapping Start > Settings > System > Bluetooth® Manager. > Connections

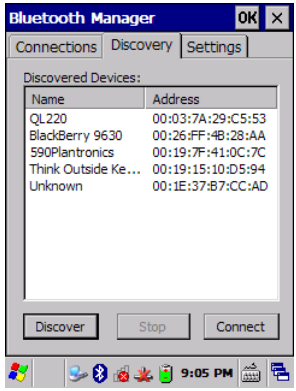
2. Search for available Bluetooth® Devices by tapping the button for the type of device you want (Printer, Serial or All) or tap Discovery > Discover to skip this step. The Falcon X3 will search for Bluetooth® Devices within range.



NOTE

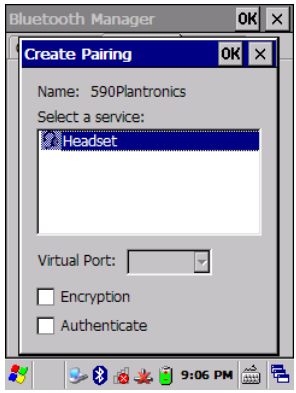
If you attempt to set up a connection when the Bluetooth® Radio is disabled, you will receive a message reminding you that the radio is turned off, and asking you if you want to turn it on. Tap Yes if you need to enable the Bluetooth® Radio.

3. Once searching is complete, Bluetooth® Device Profiles will be displayed in the Discovery tab. You can set up a connection to a device on the list, or clear it from the list by tapping the Clear button:



To set up a connection:

1. Double tap the device you want to activate, or select and then tap Connect. The resulting dialog will display services that are available on the device:



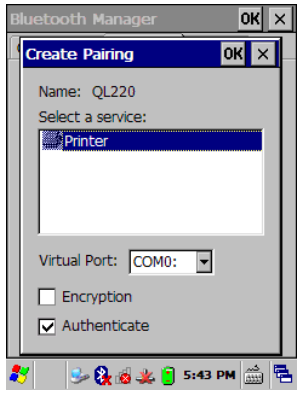
2. Select the service you want to connect to. The following table shows the icons that display for different types of service.

Icon	Service
	Dialup Networking
	Printer
	File Transfer Protocol (FTP) Object Exchange (OBEX)
	Object Push (OPP) Object Exchange (OBEX)
	ActiveSync
	Human Interface Device (HID) - Keyboard
	Serial

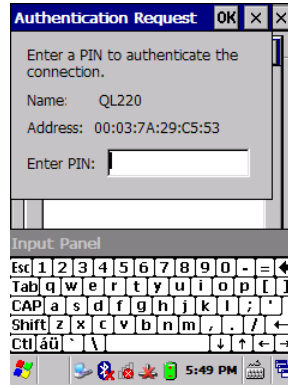
Virtual Port allows you to specify the incoming port, which is used to communicate serially with an incoming device just as if it were a physical COM port. This option is available only if you have selected a Printer or Serial service.

You can also select Encrypt or Authenticate from the Bluetooth® control panel to apply or modify those settings.

1. To require Authentication, tap the checkbox, then tap OK.



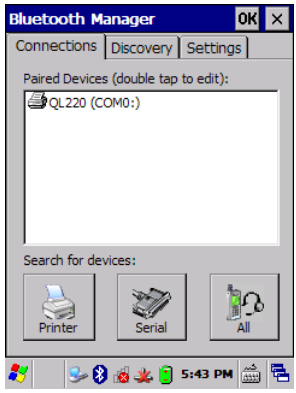
2. The Authentication Request dialog will then open, requesting that you enter a PIN. Use the Input Panel to type in the PIN.

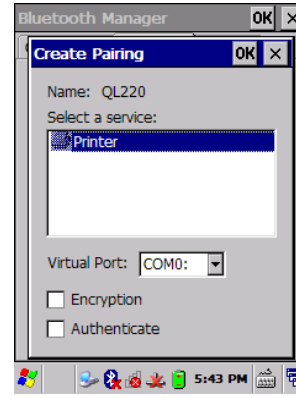


3. Tap OK to complete.

The dialog will also appear when an Authentication request is received from another device.

Once you have set up a Pairing, you can view the settings by double-tapping its name from the Connections tab. Tap the arrow to change the Virtual Port, or Delete to remove the device pairing. Tap Sync to initiate a Sync (available only if the service is an ActiveSync connection).





4.9 DATALOGIC FIRMWARE UTILITY

The Datalogic devices are equipped with a field upgradeable firmware mechanism. Firmware updates are available on the Datalogic Mobile website (http://www.mobile.datalogic.com/). After you have downloaded the desired update, there are several ways you can update the firmware on your device.

- Use Wavelink Avalanche™ if you have multiple Datalogic mobile devices to update. Refer to the Product CD included with your device for more information.
- If Wavelink Avalanche™ is not available or you have only a few Datalogic Mobile devices to update, use the Datalogic Firmware Utility (DFU), described below, to install or update the firmware using an ActiveSync connection. Refer to "Installing & Setting Up Microsoft ActiveSync" for more information.

DFU can also be used to restore the firmware onto a device that has become corrupted, such as would happen if the device were powered down during an ActiveSync firmware update (see par. 4.9.4).

The following sections provide procedures for the retrieval and installation of the most current firmware image onto a Datalogic device.

4.9.1 Retrieving a Firmware Image Update

The following instructions use Internet Explorer to retrieve the most current firmware image.

1. Launch Internet Explorer on your PC and navigate to the Datalogic Mobile website.
2. Navigate to the Downloads section of the website.
3. Select the file you want to download, then click Save to begin copying the files to your local machine (or local network location).

4.9.2 Installing DFU on the Host PC

The Datalogic Firmware Utility (DFU) provides administrators with a field upgrade mechanism. You must have Microsoft® ActiveSync already loaded and running on the host PC to use DFU. Refer to "Installing & Setting Up Microsoft ActiveSync" and "Using ActiveSync" for more information about ActiveSync.

NOTE

Prior to installing, you must remove any previous versions of DFU installed on the host PC.

To install the Datalogic Firmware Utility, complete the following steps on the PC:

1. Insert the CD ROM shipped with your device and click on the link to **Datalogic Firmware Utility**.

   OR

   Go to the Datalogic Mobile website and download the most current version of the Datalogic Firmware Utility. Unzip the file, then double-click to run **`DFU_Seup. texe`**

   Click **OK** to continue once you have removed previous versions of DFU.

2. The **Welcome to DFU Setup Program** screen opens.
   - Please exit all Windows applications before running this setup.
   - Click **Cancel** to quit Setup and close any programs you have running.
   - Click **Next** to continue the Setup.
3. Follow the onscreen instructions to complete the installation.

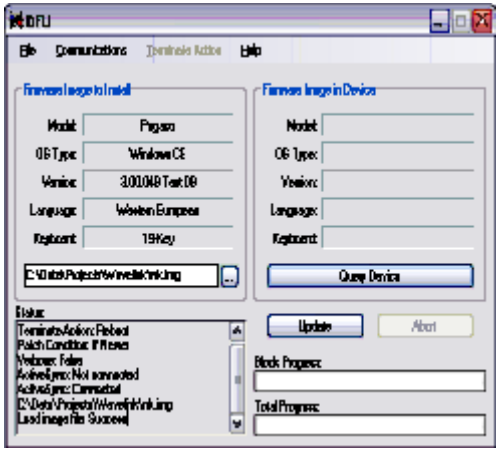
4.9.3 Updating the Firmware

After copying the firmware image to the host PC (see par. 4.9.1) and installing **DFU** (see par. 4.9.2), you can upgrade the firmware on your Datalogic device.

NOTE

The following steps require that you have already established an ActiveSync connection between the host computer and the Datalogic device. To establish an ActiveSync connection with the device, refer to "Installing & Setting Up Microsoft ActiveSync" and "Using ActiveSync"*, for more information on ActiveSync.*

1. Go to **Start > Programs > DFU > Datalogic Firmware Utility**.
2. Verify that ActiveSync is selected by clicking **Communications > ActiveSync**.
3. Click browse (**...**) and navigate to the location where you saved the firmware file for your terminal.



4. Select the current ***.img** file and click **Open**.
5. Verify that your device is turned on. Insert the device into a powered dock connected to the host computer.
6. Click **Update** on **DFU** on the host PC.

7. **DFU** will compare the selected firmware image with the firmware already loaded on the device; if the images are different, **DFU** will proceed to update the firmware image on your device.

NOTE

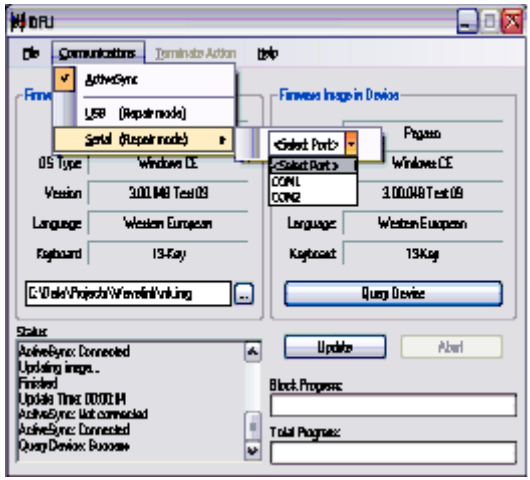
The following steps require that you have already established an ActiveSync connection between the host computer and the Datalogic device. To establish an ActiveSync connection with the device, refer to "Installing & Setting Up Microsoft ActiveSync" and "Using ActiveSync", *for more information on ActiveSync.*

8. After the firmware of your device has been updated, you must perform a warm reset of the device. Refer to the device user's manual for reset instructions.

4.9.4 Restoring the Firmware

If the firmware image on your device becomes corrupted, the device will beep twice and show a blank screen when powered on. This can happen if a firmware update is aborted, such as during a power loss or if the device is removed from the Dock before completion of the procedure.
To reinstall the firmware, complete the following steps:

1. On the PC, click **Start > Programs > DFU > Datalogic Firmware Utility**.
2. From the **Communications** menu, select the communication mode you are using to attach your dock to the PC - **USB** or **Serial**.



3. If you are using serial, then select the specific COM port to which the dock is connected. DFU will display the COM ports available on your PC in a drop down list.
4. Click browse (**...**) and navigate to the file location.
5. Select the current ***.img** file and click **Open**.
6. Verify that the device is turned on. Insert the device into a powered dock connected to the host computer.
7. Click **Update** on **DFU** on the host PC.
8. **DFU** will restore the firmware on your device.

NOTE

Please be patient and do not remove the device from the Dock during this procedure. The firmware image of the device can take as long as:

- *12 minutes to download using a USB connection.*
- *22 minutes to download using a serial connection with 115K baud rate.*
- *130 minutes to download using a serial connection with 19.2K baud rate.*

9. After the firmware has been restored, your device will automatically reset.

4.10 DATALOGIC CONFIGURATION UTILITY

Errore. L'origine riferimento non è stata trovata. Datalogic Configuration Utility (DCU) is a Datalogic Windows-based utility tool allowing the uploading, modifying and downloading of a Datalogic brand Windows CE device. Configuration settings include Scanner, Control Panel, and Datalogic Desktop Utility (DDU). The DCU installer is available on the product CD which came with your device or from the Datalogic Mobile web page (http://www.datalogic.mobile.com/).

DCU functions in both direct (with an ActiveSync connection) and indirect (with Wavelink Avalanche™) modes.
In direct mode, connect a device through ActiveSync (follow the ActiveSync connection procedure in "Setting Up ActiveSync"), and then click on the **Get from Device** icon to receive the device's current configuration.

Once loaded, the Configuration Tree (on the left side of the window) is used to navigate the device's configuration. The right side of the window is a work area where the values of different parameters may be set for each branch of the configuration tree. Click on the parameter group branch to open it and visualize the parameters you wish to modify. After altering the device's configuration, the new configuration can be sent to the terminal by clicking on the **Send to Device** icon.

Reference the Wavelink Avalanche™ documentation on your Datalogic CD for a description of indirect mode for DCU, which will allow you to update the configuration of multiple devices simultaneously over Wi-Fi.

5 TECHNICAL FEATURES

5.1 TECHNICAL DATA

Falcon X3 Common Features

PHYSICAL CHARACTERISTICS	
DIMENSIONS	Hand held: 225 x 88 x 55 mm, 64 x 40 mm at keyboard (8.9 x 3.5 x 2.2 in, 2.5 x 1.6 in) Pistol grip: 225 x 88 x 168 mm (8.9 x 3.5 x 6.6 in)
WEIGHT	Hand held: 626 g (22.1 oz) Pistol Grip: 699 G (24.6 OZ)
AUDIO	Loudspeaker; Microphone
LEDS	Three LEDs Decoding Status/ Keyboard Status/ Charging Status
DISPLAY	Transflective TFT daylight readable color display, 240 x 320 pixels, 3.5 inch diagonal, 64 K colors, 200 nit backlight, touch screen
KEYBOARD	Polycarbonate hard cap keyboards with backlight 29 key numeric or 52 key alpha numeric with discrete navigation
OPERATING TEMPERATURE*	-20ºC to 50ºC (14ºF to 122ºF)
STORAGE TEMPERATURE	-40ºC TO +70ºC (-40ºF TO 158ºF)
DROP RESISTANCE	Withstands 18 drops from 1.8 m (6 ft) onto concrete
ENVIROMENTAL SEALING	IP64 standard for water and dust resistance

* Shorter battery autonomy and slow display refreshes can be expected at low temperatures. Not intended for long cold periods or rapid hot to cold transitions

SYSTEM	
OPERATING SYSTEM	Microsoft Windows CE 6.0 with Microsoft WordPad and Internet Explorer 6.0 Microsoft Windows Mobile 6.5 with Mobile tools: Outlook Mobile, Word Mobile, Excel Mobile, PowerPoint Mobile, One Note Mobile and Internet Explorer Mobile 6.0
MICROPROCESSOR	XScale™ PXA310 @ 624 MHz
COPROCESSOR	Cortex-M3, 32 bit @ 72 MHz
SYSTEM RAM MEMORY	256 MB
SYSTEM FLASH MEMORY	256 MB
EXPANSION SLOTS	MicroSD card slot compatible with SDHC cards, user-accessible
REAL-TIME CLOCK	Time and date stamping under software control
POWER SUPPLY*	Removable battery pack with rechargeable Li-ion batteries; 3.7 V 5000 mAh (18.5 Watt hours)
COMMUNICATION	
INTERFACES	Main connector with USB Host, USB Client, RS232 up to 115.2 Kbps, and audio headset support
LOCAL AREA NETWORK (LAN)	Summit IEEE 802.11 a/b/g Frequency range: Country dependent, typically 2.4 GHz and 5.2 GHz Cisco Compatible CCX v4 Security
PERSONAL AREA NETWORK (PAN)	Bluetooth® Wireless Technology IEEE 802.15 Class 2 with EDR

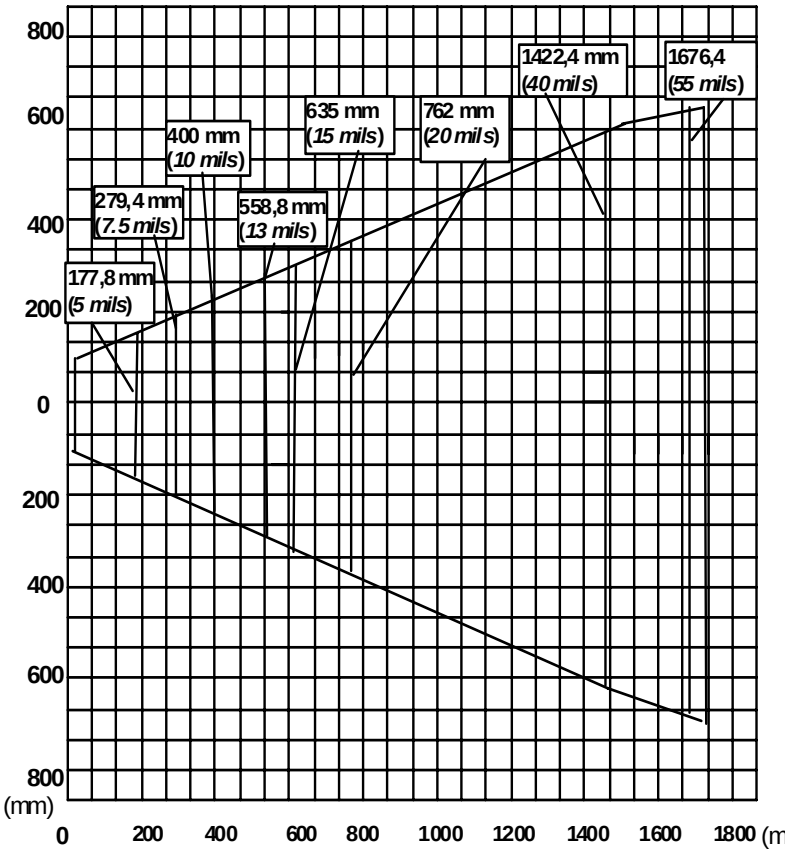
* Use only DL approved power adapters.

CAPTURE	
LASER CHARACTERISTICS	High Performance Laser (HPL) with Green Spot, Auto Ranging Laser (XLR)
SCANNING RATE	40 ± 6 scan/sec
MINIMUM RESOLUTION	0.20 mm / 7.5 mils
DEPTH OF FIELD	HPL: 8 - 91 cm (2.5 - 36 inches) depending on bar code density XLR: Non reflective labels from 5 - 243 cm (2 to 180 in) depending on bar code density; Reflective labels to 1376 cm (542 in) All ranges dependent bar code size and density. Near range on reflective bar codes determined by degree of reflectivity and width of bar code.
BAR CODES	GS1 Databar, EAN/UPC, Code 39, Code 32, 2/5 Codes, Codabar, Code 128, EAN128, MSI, Code 93
LASER CLASSIFICATION	VLD - Class 2/II EN 60825-1/CDHR
IMAGER CHARACTERISTICS	Wide Aspect Imager with Green Spot
SCANNING RATE	60 frames/sec maximum
MINIMUM RESOLUTION	Linear codes at 4 mils; 2D codes at 5 mils
DEPTH OF FIELD	4 to 40 cm (1.6 to 15.5 in), depending on bar code size and density
BAR CODES	PDF417, Micro PDF, Datamatrix, QR Code, Micro QR, Maxicode, Aztec, Postnet, Planet, Japan Post, Aztec, Australia Post, KIX Code, Royal Mail, Intelligent Mail and UPU FICS, GS1 Databar, EAN/UPC, Code 32, Code 39, 2/5 Codes, Codabar, Code 128, EAN128, MSI, Code 93, ISBT 128, Bookland EAN and ISSN EAN
LASER CLASSIFICATION	CDRH/IEC Class II
LED CLASSIFICATION	IEC Class 1M
CAMERA CHARACTERISTICS	3 Mega pixel color with autofocus and LED flash
IMAGE FORMATS	BMP, JPEG

SOFTWARE	
DEVELOPMENT	Datalogic Windows SDK™ Wavelink® Studio™ MCL-Collection™ Java Virtual Machine
TERMINAL EMULATION	Wavelink® Industrial Browser™ Wavelink® Terminal Emulation™ prelicensed
CONFIGURATION & MAINTENANCE	Wavelink Avalanche® MC prelicensed Wavelink Avalanche® SE prelicensed Avalanche Remote Control™ Datalogic Firmware Utility Datalogic Desktop Utility Datalogic Configuration Utility
SECURITY	Wavelink CE Secure Wavelink Certificate Manager
VOICE	Vo-CE™ (voice recognition) Wavelink® SpeakEasy (voice recognition)
APPLICATIONS	Pal Application Library

5.2 READING DIAGRAMS

Auto Ranging Laser (XLR) 1D



Ranges - 1D codes:

7.5 mil: Code 39; 2.5:1 - 80% MRD: 2 - 22 (in) / 5.08 - 55.88 (cm)

10 mil: Code 39; 2.5:1 - 80% MRD: 4 - 34 (in) / 10.16 - 86.36 (cm)

15 mil: Code 39; 2.5:1 - 80% MRD: 5 - 71 (in) / 12.7 - 180.34 (cm)

20 mil: Code 39; 2.2:1 - 80% MRD: 5 - 96 (in) / 12.7 - 243.84 (cm)

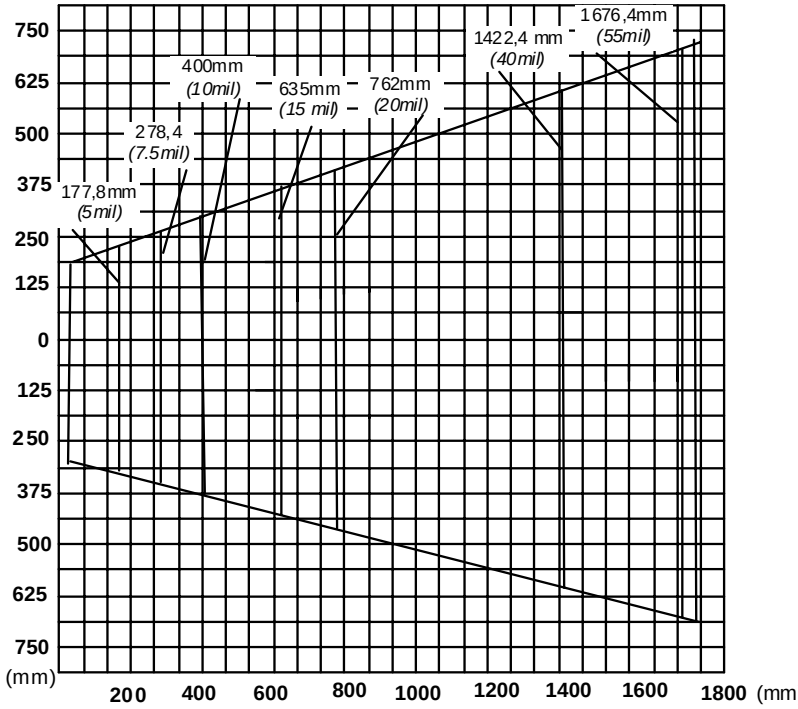
55 mil: Code 39; 2.2:1 - 80% MRD: 15 - 180 (in) / 38.1 - 457.2 (cm)

70 mil reflective: Code 39;3:1 - 80% MRD: * - 367 (in) / * - 932.18 (cm)

100 mil reflective: Code 39;3:1 - 80% MRD: * - 542 (in) / * - 1376.68 (cm)

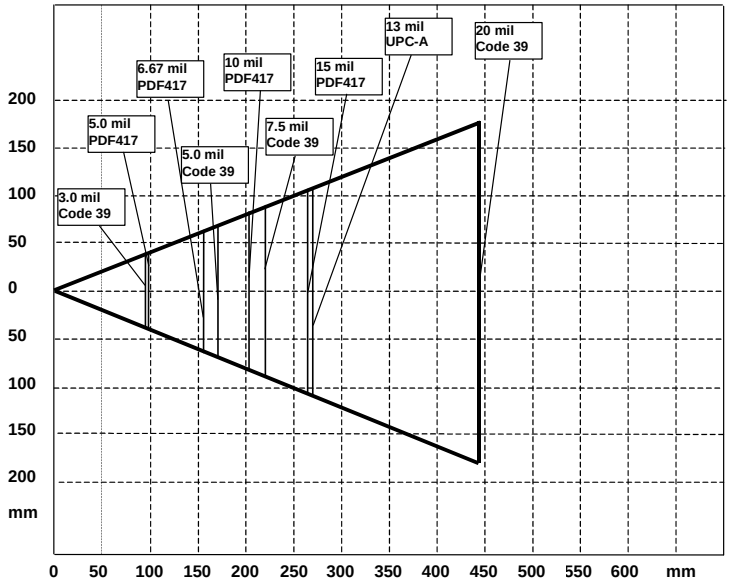
* = (near range on reflective bar codes determined by degree of reflectivity and width of bar code)

High Performance Laser 1D



Wide Aspect Imager 1D/2D

Typical Reading Diagram - Reading Zones (10° skew angle)



6 TEST CODES

High Density Codes

0.25 mm (10 mils)

Code 39

2/5 Interleaved

Code 128

80%

EAN 13

80%

EAN 8

Medium Density Codes

0.38 mm (15 mils)

Code 39

17162

Interleaved 2/5

0123456784

Code 128

test

100%

EAN 13

100%

EAN 8

Low Density Codes

0.50 mm (20 mils)

Code 39

17162

Interleaved 2/5

0123456784

Code 128

test

120%

EAN 13

120%

EAN 8

2D Codes

Datamatrix ECC200

Example

Inverse
Datamatrix ECC200

Example

SAFETY REGULATIONS

NOTE

Read this manual carefully before performing any type of connection to the Falcon X3 mobile computer.
The user is responsible for any damages caused by incorrect use of the equipment or by inobservance of the indication supplied in this manual.

GENERAL SAFETY RULES

- Use only the components supplied by the manufacturer for the specific Falcon X3 being used.
- Do not attempt to disassemble the Falcon X3 mobile computer, as it does not contain parts that can be repaired by the user. Any tampering will invalidate the warranty.
- When replacing the battery pack or at the end of the operative life of the Falcon X3 mobile computer, disposal must be performed in compliance with the laws in force.
- Before using the devices and the battery packs, read par. 2.2.
- Do not submerge the Falcon X3 in liquid products.
- For further information, refer to this manual and to the Datalogic Mobile web site: www.mobile.datalogic.com.

POWER SUPPLY

This device is intended to be connected to a UL Listed/CSA Certified computer which supplies power directly to the Falcon X3 or else be supplied by a UL Listed/CSA Certified Power Unit marked “Class 2” or LPS power source rated 5 V, 3.0 A, which supplies power directly to the Falcon X3 via the power connector of the cable.

The package includes three international plug adapters. The adapters must be plugged in the power supply before the power supply itself is plugged on the wall outlet.

FOR USE WITH MODEL NO. PSA15R-050P
POUR UTILISER AVEC MODÈLE PSA15R-050P.

LASER SAFETY

The laser light is visible to the human eye and is emitted from the window indicated in the figure.
This information applies to both laser models and the Falcon X3 Imager Aiming System.

I	D	F	E
La luce laser è visibile all'occhio umano e viene emessa dalla finestra indicata nella figura.	Die Laserstrahlung ist für das menschliche Auge sichtbar und wird am Strahlaustrittsfenster ausgesendet (siehe Bild).	Le rayon laser est visible à l'oeil nu et il est émis par la fenêtre désignée sur l'illustration dans la figure.	La luz láser es visible al ojo humano y es emitida por la ventana indicada en la figura.
LUCE LASER NON FISSARE IL FASCIO APPARECCHIO LASER DI CLASSE 2 MASSIMA POTENZA DI USCITA: 1.23 mW LUNGHEZZA D'ONDA EMESSA: 650 nm CONFORME A EN 60825-1 (2007)	LASERSTRAHLUNG NICHT IN DER STRAHL BLINKEN PRODUKT DER LASERKLASSE 2 MAXIMALE AUSGANGLEISTUNG: 1.23 mW WELLENLÄNGE: 650 nm ENTSPR. EN 60825-1 (2007)	RAYON LASER EVITER DE REGARDER LE RAYON APPAREIL LASER DE CLASSE 2 MAXIMUM PUISSANCE DE SORTIE: 1.23 mW LONGUER D'ONDE EMISE: 650 nm CONFORME A EN 60825-1 (2007)	RAYO LÁSER NO MIRAR FIJO EL RAYO APARATO LÁSER DE CLASE 2 MÁXIMA POTENCIA DE SALIDA: 1.23 mW LONGITUD DE ONDA EMITIDA: 650 nm CONFORME A EN 60825-1 (2007)

ENGLISH

The following information is provided to comply with the rules imposed by international authorities and refers to the correct use of your mobile computer.

STANDARD LASER SAFETY REGULATIONS
This product conforms to the applicable requirements of both CDRH 21 CFR 1040 Subchapter J and EN 60825-1:2001 at the date of manufacture.
For installation, use and maintenance, it is not necessary to open the device.

CAUTION

Do not attempt to open or otherwise service any components in the optics cavity. Opening or servicing any part of the optics cavity by unauthorized personnel may violate laser safety regulations. The optics system is a factory only repair item.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in exposure to hazardous visible laser light.

The product utilizes a low-power laser diode. Although staring directly at the laser beam momentarily causes no known biological damage, avoid staring at the beam as one would with any very strong light source, such as the sun. Avoid that the laser beam hits the eye of an observer, even through reflective surfaces such as mirrors, etc.

CAUTION

Use of optical systems with the scanner will increase eye hazard. Optical instruments include binoculars, microscopes, eye glasses and magnifying glasses.

ITALIANO

Le seguenti informazioni vengono fornite dietro direttive delle autorità internazionali e si riferiscono all'uso corretto del terminale.

NORMATIVE STANDARD PER LA SICUREZZA LASER
Questo prodotto risulta conforme alle normative vigenti sulla sicurezza laser alla data di produzione: CDRH 21 CFR 1040 sezione J e EN 60825-1:2001.
Non si rende mai necessario aprire l'apparecchio per motivi di installazione, utilizzo o manutenzione.

ATTENZIONE

Non tentare di accedere allo scomparto contenete i componenti ottici o di farne la manutenzione.

L'apertura dello scomparto, o la manutenzione di qualsiasi parte ottica da parte di personale non autorizzato, potrebbe violare le norme della sicurezza. Il sistema ottico può essere riparato solamente alla fabbrica.

ATTENZIONE

L'utilizzo di procedure o regolazioni differenti da quelle descritte nella documentazione può provocare un'esposizione pericolosa a luce laser visibile.

Il prodotto utilizza un diodo laser a bassa potenza. Sebbene non siano noti danni riportati dall'occhio umano in seguito ad una esposizione di breve durata, evitare di fissare il raggio laser così come si eviterebbe qualsiasi altra sorgente di luminosità intensa, ad esempio il sole. Evitare inoltre di dirigere il raggio laser negli occhi di un osservatore, anche attraverso superfici riflettenti come gli specchi.

ATTENZIONE

L'uso di strumenti ottici assieme allo scanner può aumentare il pericolo di danno agli occhi. Tali strumenti ottici includono cannocchiali, microscopi, occhiali e lenti di ingrandimento.

DEUTSCH

Die folgenden Informationen stimmen mit den Sicherheitshinweisen überein, die von internationalen Behörden auferlegt wurden, und sie beziehen sich auf den korrekten Gebrauch vom Terminal.

NORM FÜR DIE LASERSICHERHEIT
Dies Produkt entspricht am Tag der Herstellung den gültigen EN 60825-1:2001 und CDRH 21 CFR 1040 Subchapter J Normen für die Lasersicherheit.
Es ist nicht notwendig, das Gerät wegen Betrieb oder Installations-, und Wartungs-Arbeiten zu öffnen.

ACHTUNG

Unter keinen Umständen darf versucht werden, die Komponenten im Optikhohlraum zu öffnen oder auf irgendwelche andere Weise zu warten. Das Öffnen bzw. Warten der Komponenten im Optikhohlraum durch unbefugtes Personal verstößt gegen die Laser-Sicherheitsbestimmungen. Das Optiksystem darf nur werkseitig repariert werden.

ACHTUNG

Jegliche Änderungen am Gerät sowie Vorgehensweisen, die nicht in dieser Betriebsanleitung beschrieben werden, können ein gefährliches Laserlicht verursachen.

Der Produkt benutzt eine Laserdiode. Obwohl zur Zeit keine Augenschäden von kurzen Einstrahlungen bekannt sind, sollten Sie es vermeiden für längere Zeit in den Laserstrahl zu schauen, genauso wenig wie in starke Lichtquellen (z.B. die Sonne). Vermeiden Sie es, den Laserstrahl weder gegen die Augen eines Beobachters, noch gegen reflektierende Oberflächen zu richten.

ACHTUNG

Die Verwendung von Optiksystemen mit diesem Scanner erhöht die Gefahr einer Augenbeschädigung. Zu optischen Instrumenten gehören unter anderem Ferngläser, Mikroskope, Brillen und Vergrößerungsgläser.

FRANÇAIS

Les informations suivantes sont fournies selon les règles fixées par les autorités internationales et se réfèrent à une correcte utilisation du terminal.

NORMES DE SECURITE LASER
Ce produit est conforme aux normes de sécurité laser en vigueur à sa date de fabrication: CDRH 21 CFR 1040 sous-chapitre J et EN 60825-1:2001.
Il n'est pas nécessaire d'ouvrir l'appareil pour l'installation, l'utilisation ou l'entretien.

ATTENTION

Ne pas essayer d'ouvrir ou de réparer les composants de la cavité optique. L'ouverture de la cavité optique ou la réparation de ses composants par une personne non qualifiée peut entraîner le nonrespect des règles de sécurité relatives au laser. Le système optique ne peut être réparé qu'en usine.

ATTENTION

L'utilisation de procédures ou réglages différents de ceux donnés ici peut entraîner une dangereuse exposition à lumière laser visible.

Le produit utilise une diode laser. Aucun dommage aux yeux humains n'a été constaté à la suite d'une exposition au rayon laser. Eviter de regarder fixement le rayon, comme toute autre source lumineuse intense telle que le soleil. Eviter aussi de diriger le rayon vers les yeux d'un observateur, même à travers des surfaces réfléchissantes (miroirs, par exemple).

ATTENTION

L'utilisation d'instruments optiques avec le scanneur augmente le danger pour les yeux. Les instruments optiques comprennent les jumelles, les microscopes, les lunettes et les verres grossissants.

ESPAÑOL

Las informaciones siguientes son presentadas en conformidad con las disposiciones de las autoridades internacionales y se refieren al uso correcto del terminal.

NORMATIVAS ESTÁNDAR PARA LA SEGURIDAD LÁSER
Este aparato resulta conforme a las normativas vigentes de seguridad láser a la fecha de producción: CDRH 21 CFR 1040 Sección J y EN 60825-1:2001.
No es necesario abrir el aparato para la instalación, la utilización o la manutención.

ATENCIÓN

No intente abrir o de ninguna manera dar servicio a ninguno de los componentes del receptáculo óptico. Abrir o dar servicio a las piezas del receptáculo óptico por parte del personal no autorizado podría ser una violación a los reglamentos de seguridad. El sistema óptico se puede reparar en la fábrica solamente.

ATENCIÓN

La utilización de procedimientos o regulaciones diferentes de aquellas describidas en la documentación puede causar una exposición peligrosa a la luz láser visible.

El aparato utiliza un diodo láser a baja potencia. No son notorios daños a los ojos humanos a consecuencia de una exposición de corta duración. Eviten de mirar fijo el rayo láser así como evitarían cualquiera otra fuente de luminosidad intensa, por ejemplo el sol. Además, eviten de dirigir el rayo láser hacia los ojos de un observador, también a través de superficies reflectantes como los espejos.

ATENCIÓN

El uso de sistemas ópticos con el escáner aumentará el riesgo de daños oculares. Los instrumentos ópticos incluyen binoculares, microscopios, lentes y lupas.

LED CLASS

According to EN60825-1:2001, the Falcon X3 1D models which use the green spot LED are also CLASS 1 LED PRODUCTS.

APPARECCHIO LED CLASSE 1 IEC
PRODUIT LED DE CLASSE 1 IEC
PRODUKT LED KLASSE 1 IEC
PRODUCTO LED DE CLASE 1 IEC

According to EN60825-1:2001, the Falcon X3 2D models which use the illuminator LED are also CLASS 1M LED PRODUCTS.

LED LIGHT
DO NOT VIEW DIRECTLY
WITH OPTICAL INSTRUMENTS
CLASS 1M LED PRODUCT

LUCE LED
NON OSSERVARE DIRETTAMENTE
CON STRUMENTI OTTICI
APPARECCHIO LED DI CLASSE 1M

LAMPE LED
NE PAS OBSERVER DIRECTEMENT
AVEC INSTRUMENTS OPTIQUES
APPAREIL LED DE CLASSE 1M

LUZ LED
NO OBSERVAR DIRECTAMENTE
CON INSTRUMENTOS ÓPTICOS.
PRODUCTO LED DE CLASE 1M

LED-LICHT
NICHT DIREKT MIT OPTISCHEN
INSTRUMENTEN BETRACHTEN.
GERÄTEKLASSE 1M.

RADIO COMPLIANCE

In radio systems configured with mobile computers and access points, the frequencies to be used must be allowed by the spectrum authorities of the specific country in which the installation takes place. Be absolutely sure that the system frequencies are correctly set to be compliant with the spectrum requirements of the country.
The Radio modules used in this product automatically adapt to the frequencies set by the system and do not require any parameter settings.

This is a Class A product. In a domestic environment this product may cause radio interferences in which case the user may be required to take adequate measures.

1999/5/EEC R&TTE Compliance

CE ! 2155

Information for the User

ENGLISH

Contact the competent authority responsible for the management of radio frequency devices of your country to verify any possible restrictions or licenses required.

Refer to the web site http://europa.eu.int/comm/enterprise/rtte/spectr.htm for further information.

ITALIANO

Prendi contatto con l'autorità competente per la gestione degli apparati a radio frequenza del tuo paese, per verificare eventuali restrizioni o licenze. Ulteriori informazioni sono disponibili sul sito:
http://europa.eu.int/comm/enterprise/rtte/spectr.htm.

FRANÇAIS

Contactez l'autorité compétente en la gestion des appareils à radio fréquence de votre pays pour vérifier d'éventuelles restrictions ou licences. Pour tout renseignement vous pouvez vous adresser au site web:
http://europa.eu.int/comm/enterprise/rtte/spectr.htm.

DEUTSCH

Wenden Sie sich an die für Radiofrequenzgeräte zuständige Behörde Ihres Landes, um zu prüfen ob es Einschränkungen gibt, oder eine Lizenz erforderlich ist. Weitere Informationen finden Sie auf der Web Seite:
http://europa.eu.int/comm/enterprise/rtte/spectr.htm.

ESPAÑOL

Contacta la autoridad competente para la gestión de los dispositivos de radio frecuencia de tu país, para verificar cualesquiera restricciones o licencias posibles requerida. Además se puede encontrar mas información en el sitio Web:http://europa.eu.int/comm/enterprise/rtte/spectr.htm.

FCC COMPLIANCE

FCC Regulations:

- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
  (1) This device may not cause harmfull interference, and
  (2) this device must accept any interference received,
  including interference that may cause undesired operation.

- The User is cautioned that changes or modifications not expressly approved by Datalogic for compliance could void the User's authority to operate the equipment.

- The antenna(s) used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

RF EXPOSURE INFORMATION (SAR)

This model device meets the government's requirements for exposure to radio waves. This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

The exposure standard for wireless devices employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6W/kg. *Tests for SAR are conducted using standard operating positions accepted by the FCC with the device transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. This is because the device is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output.

While there may be differences between the SAR levels of various devices and at various positions, they all meet the government requirement.

The FCC has granted an Equipment Authorization for this model device with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this model device is on file with the FCC and can be found under the Display Grant section of http://www.fcc.gov/oet/fccid after searching on the below FCC IDs:
FCC ID: U4SFALX3

This device is compliant with SAR for general population /uncontrolled exposure limits in ANSI/IEEE C95.1-1999 and had been tested in accordance with the measurement methods and procedures specified in OET Bulletin 65 Supplement C.

INDUSTRY CANADA COMPLIANCE

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Equipment is certified to the requirements of RSS-210 for 2.4-GHz per IEEE 802.11 (b)(g), IEEE 802.15 .

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

The County Code Selection feature is disabled for products marketed in the US/Canada.

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. To maintain with IC RF exposure compliance requirements please follow operation instruction as documented in this manual.

To reduce the potential for harmful interference to co-channel mobile satellite systems this device is limited to indoor use only.

Please note that high-power radars are allocated as primary users (meaning they have priority) of the bands 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to the WiFi radio when operating in these frequency bands.

SAR COMPLIANCE

This product has been tested and found to comply with the following standards:

- OET BULLETIN 65 SUPPLEMENT C: evaluating compliance with FCC guidelines for human exposure to radio frequency electromagnetic fields.

PATENTS

This product is covered by one or more of the following patents.
Design Pat.: EP 1,180,673; AU 329,643.
US Pat.: 5,198,649; 5,311,000; 5,440,110; 5,481,098; 5,493,108; 5,686,716; 5,992,740; 6,412,698; 6,415,978; 6,454,168; 6,478,224; 6,513,714; 6,561,427; 6,585,157; 6,808,114 B1; 6,997,385 B2; 7,108,170; 7,387,246 B2.
European Pat.: 789,315 B1; 1,128,315 B1; 1,396,811 B1; 1,413,971 B1.

Additional patents pending.

WEEE COMPLIANCE

Informazione degli utenti ai sensi della Direttiva Europea 2002/96/EC

L'apparecchiatura che riporta il simbolo del bidone barrato deve essere smaltita, alla fine della sua vita utile, separatamente dai rifiuti urbani.

Smaltire l'apparecchiatura in conformità alla presente Direttiva consente di:

- evitare possibili conseguenze negative per l'ambiente e per la salute umana che potrebbero invece essere causati dall'errato smaltimento dello stesso;
- recuperare materiali di cui è composto al fine di ottenere un importante risparmio di energia e di risorse.

Per maggiori dettagli sulle modalità di smaltimento, contattare il Fornitore dal quale è stata acquistata l'apparecchiatura o consultare la sezione dedicata sul sito www.mobile.datalogic.com.

Information for the user in accordance with the European Commission Directive 2002/96/EC

At the end of its useful life, the product marked with the crossed out wheeled wastebin must be disposed of separately from urban waste.

Disposing of the product according to this Directive:

- avoids potentially negative consequences to the environment and human health which otherwise could be caused by incorrect disposal
- enables the recovery of materials to obtain a significant savings of energy and resources.

For more detailed information about disposal, contact the supplier that provided you with the product in question or consult the dedicated section at the website www.mobile.datalogic.com.

Information aux utilisateurs concernant la Directive Européenne 2002/96/EC

Au terme de sa vie utile, le produit qui porte le symbole d'un caisson à ordures barré ne doit pas être éliminé avec les déchets urbains.

Éliminer ce produit selon cette Directive permet de:

- éviter les retombées négatives pour l'environnement et la santé dérivant d'une élimination incorrecte
- récupérer les matériaux dans le but d'une économie importante en termes d'énergie et de ressources

Pour obtenir des informations complémentaires concernant l'élimination, veuillez contacter le fournisseur auprès duquel vous avez acheté le produit ou consulter la section consacrée au site Web www.mobile.datalogic.com.

Información para el usuario de accuerdo con la Directiva Europea 2002/96/CE

Al final de su vida útil, el producto marcado con un simbolo de contenedor de bassura móvil tachado no debe eliminarse junto a los desechos urbanos.

Eliminar este producto de accuerdo con la Directiva permite de:

- evitar posibles consecuencias negativas para el medio ambiente y la salud derivadas de una eliminación inadecuada
- recuperar los materiales obteniendo así un ahorro importante de energía y recursos

Para obtener una información más detallada sobre la eliminación, por favor, póngase en contacto con el proveedor donde lo compró o consultar la sección dedicada en el Web site www.mobile.datalogic.com.

Benutzerinformation bezüglich Richtlinie 2002/96/EC der europäischen Kommission

Am Ende des Gerätelebenszyklus darf das Produkt nicht über den städtischen Hausmüll entsorgt werden. Eine entsprechende Mülltrennung ist erforderlich.

Beseitigung des Produkts entsprechend der Richtlinie:

- verhindert negative Auswirkungen für die Umwelt und die Gesundheit der Menschen
- ermöglicht die Wiederverwendung der Materialien und spart somit Energie und Resourcen

Weitere Informationen zu dieser Richtlinie erhalten sie von ihrem Lieferanten über den sie das Produkt erworben haben, oder besuchen sie unsere Hompage unter www.mobile.datalogic.com.

GLOSSARY

Access Point

A device that provides transparent access between Ethernet wired networks and IEEE 802.11 interoperable radio-equipped mobile units. Hand-held mobile computers, PDAs or other devices equipped with radio cards, communicate with wired networks using Access Points (AP). The mobile unit (mobile computer) may roam among the APs in the same subnet while maintaining a continuous, seamless connection to the wired network.

Applet

Diminutive form of app (application), it refers to simple, single-function programs that often ship with a larger product. Programs such as Windows' Calculator, File Manager, and Notepad are examples of applets.

Barcode

A pattern of variable-width bars and spaces which represents numeric or alphanumeric data in binary form. The general format of a barcode symbol consists of a leading margin, start character, data or message character, check character (if any), stop character, and trailing margin. Within this framework, each recognizable symbology uses its own unique format.

Baud Rate

A measure for data transmission speed.

Bit

Binary digit. One bit is the basic unit of binary information. Generally, eight consecutive bits compose one byte of data. The pattern of 0 and 1 values within the byte determines its meaning.

Bluetooth®

A standard radio technology using a proprietary protocol. The onboard Bluetooth® module in the mobile computer is compatible with the 1.1 protocol.

Byte

On an addressable boundary, eight adjacent binary digits (0 and 1) combined in a pattern to represent a specific character or numeric value. Bits are numbered from the right, 0 through 7, with bit 0 the low-order bit. One byte in memory can be used to store one ASCII character.

Decode

To recognize a bar code symbology *(e.g.,* Codabar, Code 128, Code 3 of 9, UPC/EAN, etc.) and analyze the content of the bar code scanned.

Depth of Field (DOF)

The portion of a scene that appears acceptably sharp in the image. Although a lens can precisely focus at only one distance, the decrease in sharpness is

gradual on each side of the focused distance, so that within the DOF, the unsharpness is imperceptible under normal viewing conditions.

EDGE
Enhanced Data rates for GSM Evolution (EDGE) is a backward-compatible digital mobile phone technology that allows improved data transmission rates, as an extension on top of standard GSM. EDGE is considered a 3G radio technology and is part of ITU's 3G definition.

EEPROM

Electrically Erasable Programmable Read-Only memory. An on-board non-volatile memory chip.

Ethernet

The standard local area network (LAN) access method. A reference to "LAN," "LAN connection" or "network card" automatically implies Ethernet. Defined by the IEEE as the 802.3 standard, Ethernet is used to connect computers in a company or home network as well as to connect a single computer to a cable modem or DSL modem for Internet access.

Firmware

Firmware is a software program or set of instructions programmed on a hardware device. It provides the necessary instructions for how the device communicates with the other computer hardware. Firmware is typically stored in the flash ROM of a hardware device. While ROM is "read-only memory," flash ROM can be erased and rewritten because it is actually a type of flash memory.

Flash Disk

Non-volatile memory for storing application and configuration files.

GSM
Global System for Mobile communication. It is a standard for digital cellular communications, currently used in the 900 MHz and 1800 MHz bands.

Host

A computer that serves other mobile computers in a network, providing services such as network control, database access, special programs, supervisory programs, or programming languages.

WLAN

A Wireless Local Area Network links devices via a wireless distribution method (typically spread-spectrum or OFDM radio), and usually provides a connection through an access point to the wider internet. This gives users the mobility to move around within a local coverage area and still be connected to the network.

IEEE 802.11

A set of standards carrying out wireless local area network (WLAN) computer communication in the 2.4, 3.6 and 5 GHz frequency bands. They are created and maintained by the IEEE LAN/MAN Standards Committee.

Liquid Crystal Display (LCD)

A display that uses liquid crystal sealed between two glass plates. The crystals are excited by precise electrical charges, causing them to reflect light outside according to their bias. They use little electricity and react relatively quickly. They require external light to reflect their information to the user.

Light Emitting Diode (LED)

A low power electronic light source commonly used as an indicator light. It uses less power than an incandescent light bulb but more than a Liquid Crystal Display (LCD).

Null modem cable

RS-232 serial cable where the transmit and receive lines are crosslinked. In some cables there are also handshake lines crosslinked. In many situations a straight through serial cable is used, together with a null modem adapter. The adapter contains the necessary crosslinks between the signals.

Pairing

A Bluetooth pairing occurs when two Bluetooth devices agree to communicate with each other and establish a connection.

Piconet

A piconet is a Bluetooth PAN that links up to eight devices. Each piconet is controlled by one master device, and up to seven slave devices at any one time. Any device may be a member of more than one piconet, changing its membership as a user moves from one area to another.

RAM

Random Access memory. Data in RAM can be accessed in random order, and quickly written and read.

RF

Radio Frequency.

RTC

Real Time Clock.

TDMA

Time division multiple access (TDMA) is digital transmission technology that allows a number of users to access a single radio-frequency (RF) channel without interference by allocating unique time slots to each user within each channel. The TDMA digital transmission scheme multiplexes three signals over a single channel. The current TDMA standard for cellular divides a single

channel into six time slots, with each signal using two slots, providing a 3 to 1 gain in capacity over advanced mobile-phone service (AMPS). Each caller is assigned a specific time slot for transmission.

USB

Universal Serial Bus. Type of serial bus that allows peripheral devices (disks, modems, printers, digitizers, data gloves, etc.) to be easily connected to a computer. A “plug-and-play” interface, it allows a device to be added without an adapter card and without rebooting the computer (the latter is known as hot-plugging). The USB standard, developed by several major computer and telecommunications companies, supports data-transfer speeds up to 12 megabits per second, multiple data streams, and up to 127 peripherals.

WWAN

Stands for "Wide Area Network." It is similar to a Local Area Network (LAN), but it is not limited to a single location and it uses Mobile telecommunication cellular network technologies such as UMTS, GPRS, CDMA2000, GSM, CDPD, Mobitex, HSDPA or 3G to transfer data. WWAN connectivity allows a user with a laptop and a WWAN card to surf the web, check email, or connect to a Virtual Private Network (VPN) from anywhere within the regional boundaries of cellular service.

WPAN

A Wireless Personal Area Network is a personal area network - a network for interconnecting devices centered around an individual person's workspace - in which the connections are wireless. Typically, a wireless personal area network uses some technology that permits communication within about 10 meters - in other words, a very short range.

INDEX

A

Accessories; 7

B

Batteries and Maintenance; 8
Bluetooth® Manager Device Setup; 54
Buttons; 46

C

Charging the Batteries; 8
Cleaning the Mobile Computer; 13
Connections; 14
Connection to USB peripherals; 16
Control Panel; 45
Conventions; v

D

Data Capture; 28
Data Capture Configuration; 40
Datalogic Firmware Utility; 60
Description of the Keys; 32

F

Falcon™ X3 Description; 1
FCC Compliance; 86

G

General View; vi
Glossary; 92

I

Imager Data Capture; 30
Industry Canada Compliance; 88

L

Laser Data Capture; 29
Laser Safety; 78
LED Class; 84

M

Micro SD Card Insertion; 5
Models Description; 3

P

Package Contents; 4
Patents; 89

R

Radio Compliance; 84
Reading Diagram; 70
Reference Documentation; v
References; v
Replacing the Battery Pack; 10
Resetting the Falcon X3; 36
RF Exposure Information (SAR); 87
RS232 Connection; 18

S

Safety Regulations; 77
SAR Compliance; 89
Services and Support; v
Startup; 24
Status Indicators; 38
Stylus Calibration; 48

T

Taskbar; 39
Technical Features; 66
Test Codes; 73
Touch Gestures; 26

U

USB Connection; 14
Using the Stylus; 25

V

Volume Settings; 50

W

WEEE Compliance; 90
Windows Connections; 52

Windows Mobile Welcome Wizard; 27
Windows Mobile® Device Center; 52
Wireless and Radio Frequencies Warnings; 22
Wireless Communications; 47
WLAN Connection; 19
WPAN Connections; 21

Datalogic Mobile S.r.l.
Via S. Vitalino, 13
40012 - Lippo di Calderara
Bologna - Italy

CE 10
CE 2155

dichiara che
declares that the
déclare que le
bescheinigt, daß das Gerät
declare que el

FALCON X3

modelli con funzionalità radio 802.11a/b/g+BT
models with 802.11a/b/g+BT radio feature
modèles avec 802.11a/b/g+BT radio intégrés
modelle mit 802.11a/b/g+BT radio-funktionalität
modelos con funcionalidad radio 802.11a/b/g+BT

sono conformi alle Direttive del Consiglio Europeo sottoelencate:
are in conformity with the requirements of the European Council Directives listed below
sont conformes aux spécifications des Directives de l'Union Européenne ci-dessous:
der nachstehend angeführten Direktiven des Europäischen Rats:
cumple con los requisitos de las Directivas del Consejo Europeo, según la lista siguiente:

1999/5/EEC R&TTE and 2004/108/EC EMC Directives

Questa dichiarazione è basata sulla conformità dei prodotti alle norme seguenti:
This declaration is based upon compliance of the products to the following standards:
Cette déclaration repose sur la conformité des produits aux normes suivantes:
Diese Erklärung basiert darauf, daß das Produkt den folgenden Normen entspricht:
Esta declaración se basa en el cumplimiento de los productos con la siguientes normas:

EN 55022: 2006 **AMENDMENT A1:2007** **(CLASS A ITE) :**	*INFORMATION TECHNOLOGY EQUIPMENT* *RADIO DISTURBANCE CHARACTERISTICS* *LIMITS AND METHODS OF MEASUREMENTS*
EN 55024: 1998 **AMENDMENT A1:2001** **AMENDMENT A2:2003**	*INFORMATION TECHNOLOGY EQUIPMENT* *IMMUNITY CHARACTERISTICS* *LIMITS AND METHODS OF MEASUREMENT*
ETSI EN 301 489-17 V1.2.1, AUGUST 2002 :	*ELECTROMAGNETIC COMPATIBILITY AND RADIO SPECTRUM MATTERS (ERM); ELECTROMAGNETIC COMPATIBILITY (EMC) STANDARD FOR RADIO EQUIPMENT AND SERVICES; PART 17: SPECIFIC CONDITIONS FOR 2,4GHZ WIDEBAND TRANSMISSION SYSTEMS AND 5GHZ HIGH PERFORMANCE RLAN EQUIPMENT*
ETSI EN 300 328 V1.7.1, OCTOBER 2006 :	*ELECTROMAGNETIC COMPATIBILITY AND RADIO SPECTRUM MATTERS (ERM); WIDEBAND TRANSMISSION SYSTEMS; DATA TRANSMISSION EQUIPMENT OPERATING IN THE 2,4GHZ ISM BAND AND USING WIDE BAND MODULATION TECHNIQUES; HARMONIZED EN COVERING ESSENTIAL REQUIREMENTS UNDER ARTICLE 3.2 OF THE R&TTE DIRECTIVE*
ETSI EN 301 893 V1.5.1, DECEMBER 2008	*BROADBAND RADIO ACCESS NETWORKS (BRAN);5 GHZ HIGH PERFORMANCE RLAN;HARMONIZED EN COVERING THE ESSENTIAL REQUIREMENTS OF ARTICLE 3.2 OF THE R&TTE DIRECTIVE*

EN 60950-1:2006 **AMENDMENT A11:2009**	*INFORMATION TECHNOLOGY EQUIPMENT - SAFETY - BASIC RESTRICTIONS FOR RF EXPOSURE IN COUNCIL RECOMMENDATION 1999/519/EC*

2006/95/EC Low Voltage Directive

EN 60950-1:2006 **AMENDMENT A11:2009**	*INFORMATION TECHNOLOGY EQUIPMENT - SAFETY - PART 1: GENERAL REQUIREMENTS*
EN 60825-1:2007	*LASER SAFETY*

2006/66/EC and 2008/12/EC Battery Directives

Batteries and accumulators and waste batteries and accumulators

2002/95/EC RoHS Directive

Restriction of the use of certain hazardous substances in electrical and electronic equipment

2002/96/EC WEEE Directive

Lippo di Calderara, July 2, 2010

Paola Chientaroli

Paola Chientaroli
Quality Assurance Manager

www.mobile.datalogic.com

World wide Sales Network
available from: www.mobile.datalogic.com/contacts

Datalogic Mobile S.r.l.
Via S. Vitalino, 13
40012 Lippo di Calderara di Reno
Bologna - Italy
Telephone: (+39) 051-3147011
Fax: (+39) 051-3147561

©2010-2011 Datalogic Mobile S.r.l. 02/11